

ZOOM Technologies



Instruction Manual

Zoom Pro

Model DB2200

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WARNING!!!!

This machine is a high-speed commercial double barrel leaf-cutting machine, all safety precautions must be observed to eliminate and reduce the risk of personal injury. Improper or careless use may result in serious or fatal injury.

Notice

Make sure that all people running this machine fully understand the operation and safety precautions before using. All maintenance needs to be followed to ensure safety and proper use.

First time users will need to read and understand the instruction manual for proper and safe use.

Make sure this instruction manual is always supplied to other operators who are not familiar with this specific machine operation for the first time.

IMPORTANT SAFETY INSTRUCTIONS

READ THESE INSTRUCTIONS CAREFULLY

Read all instructions completely before machine is operated

KEEP THESE INSTRUCTIONS

Retain instructions for future reference for all users.

PAY ATTENTIONS TO ALL WARNING LABELS

All warnings on the machine and in the instruction manual should be precisely followed.

WARINING: To reduce risk of fire or electrical shock, do not expose this machine to water while plugged in.

The machine must have a properly grounded receptacle to meet local code.

Refer to machine labeling to determine correct electrical requirements.

The machine requires a 15A circuit breaker.

Observe all electrical codes and regulations for your area.

This machine requires a minimum of 12AWG copper conductor. Maximum cord length should not exceed 50ft/15meters. An undersized cord will result in loss of power, overheating and possible fire.

The machine must be unplugged before any protective covers are removed.

Do not attempt to service electrical components on this machine, as there is a high risk of dangerous voltage, possible fire and electrical shock.

Read all WARNINGS listed below

DO NOT operate this machine without all the protective covers installed.

Do not operate the machine while tired or under the influence of drugs, alcohol or other medications.

Do not reach inside barrels while the machine is plugged in for safety.

Keep visitors a safe distance from the work area and children away at all times.

Do not allow lubricants to build up around the machine. This could cause a slipping hazard for the operator and others.

Replace warning labels if they become obscured, unreadable or removed. Please request new labels from your retailer.

Zoom Double Barrel Trimmer

WARNING!

Never put objects into barrels that cannot be processed by the trimmer. Hard objects the operator does not notice can cause damage and/or bodily harm and will void warranty.

Abide by all warning labels. Never plug in the trimmer with shrouds, cover, or guards removed.

DO NOT change or modify any part of the trimmer or accessories.

Never run the trimmer unattended.

Only service this trimmer as directed in the manual. Do not make any changes to the trimmer that is not listed in the manual as this may expose you to dangerous voltage and/or other hazards.

Only qualified service personal should service this trimmer if not covered in the instruction manual. If the trimmer does not operate normally by following the operation instructions, adjust only the controls that are covered in the instruction manual and seek a qualified service technician for other issues.

Only original replacement parts supplied by the original manufacture must be used on this trimmer. Non-certified parts will void warranty.

WARNING!

Careless or improper use of this trimmer may cause serious or fatal injury. Follow all safety guidelines listed in the manual and on the trimmer.

Safety glassed must be worn to reduce risk of injury.

To reduce the risk of injury keep all body parts, long hair and loose clothing away from all moving parts. Do not wear long sleeve or gloves, as this will be a hazard.

Zoom Double Barrel Trimmer

Operation

The Zoom double barrel trimmer has been adjusted and tested by the manufacture before shipping. Material buildup and normal wear will require you to check the trimmer each day before the initial startup for the proper settings. Please refer to the section on page 8

Before you start using your Zoom trimmer you should familiarize yourself with all the components and operation of the trimmer. To do this you will need to go through the entire instruction manual. Anticipate disassembly/assembly for cleaning will need to be done once or more per day depending on cutting material type and usage.

WARNING!

The following should only be done when the power supply is disconnected.

Pages 5-7

Routine checking and cleaning procedures that should be followed daily.

Removing the barrels:

Warning!!! The following should only be done when the power is off and disconnected.

Barrel belt removal

Unlock the barrel motor lever and pull the belt towards you (raising the motor) and lightly tighten the handle. Then remove the belt from around the idler pulley and barrels.

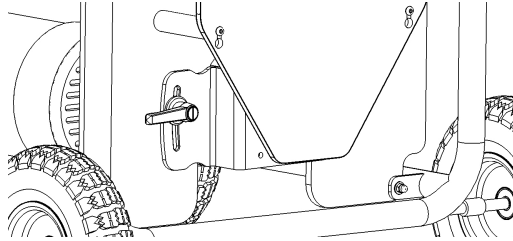


Figure 1.1

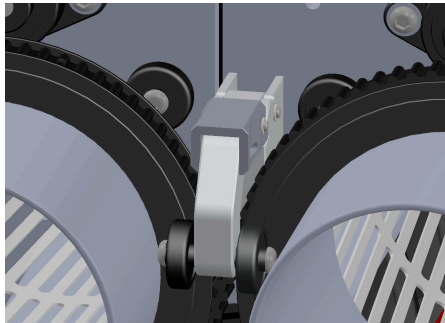


Figure 1.2

Barrel bearing guide assembly

Pull the top slider block out and swing the barrel guide bearings up out of the way for belt & barrel removal. With the belt removed you can then proceed to remove the barrels one at a time.

Pull from the pulley side and slide one barrel out at a time by pulling and rotating. As the barrel is being pulled out keep them as parallel as possible to the machine to avoid damage.

Be **EXTREMELY CAREFUL** not to damage the barrels. Any damage to the barrels will directly affect cutting performance.

Rotate pins 180 degrees to
remove all shrouds

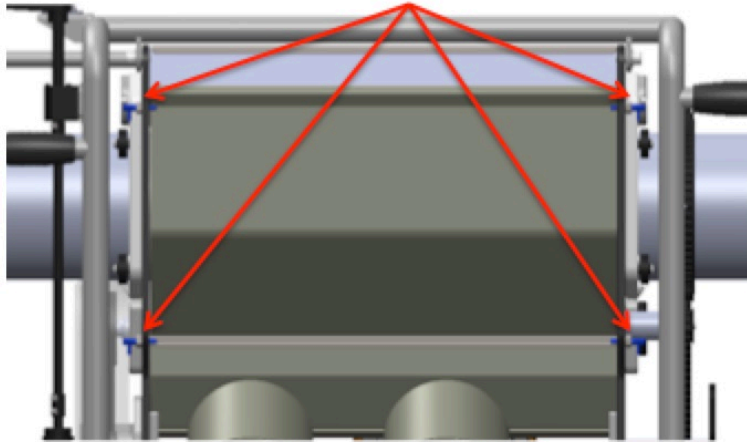


Figure 1.4

Shroud removal – Rotate the side pins to remove the shroud covers on both sides with the top of the bottom vent cover and set aside.

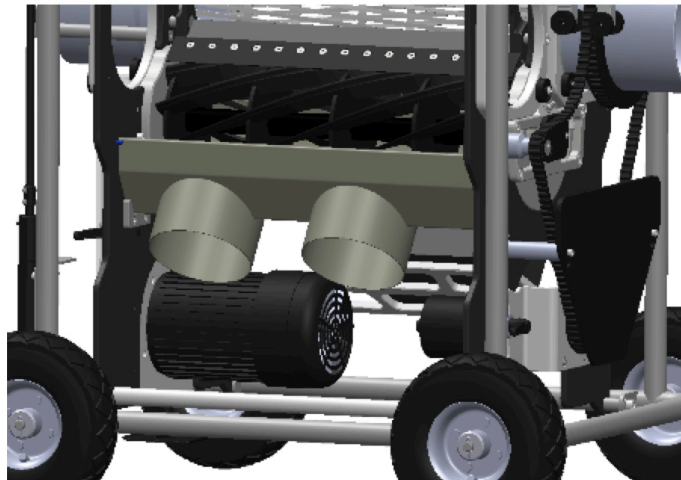


Figure 1.5

Shroud removed

Remove the hoses and leave the bottom vent cover shroud on while cleaning the reel with water, as it will keep the motors and electrical while spraying. This bottom vent shroud can be lifted out over the guide blocks and cleaned separately if needed.

Inspection of the blades

WARNING!! The following should only be done when the power is disconnected. Never slide your fingers across the reel blades as they are very sharp and may injure you.

With the shroud covers removed visually check for any damage on the cutting edges. To rotate the reels blades use a small block of wood (2x2 or 2x4) and never your fingers. Refer to Figure 1.6

If there is damage to the blades this must be corrected before further assembly and operation.

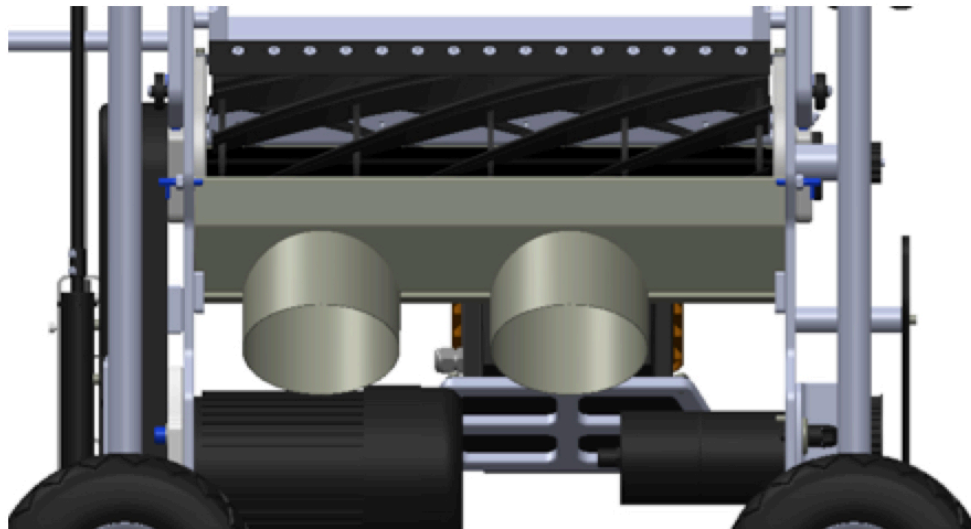


Figure 1.6

Reel blades

It's best to use a block of wood to rotate the blades as they are very sharp and may very easily cut your hands or fingers.

Make sure the reel turns freely. The reel blades should have no contact with the knife blade but will be extremely close. This will ensure proper cutting action and will help maintain a sharp cutting edge. Please refer to the adjustment section if the reel blades need to be adjusted.

Note:

If there is damage to the reel blades that will not allow for smooth rotation, the machine will need to be serviced by an authorized service technician. Damage from rocks and other hard objects are not covered under warranty.

Trimmer and vacuum electrical:

Make sure the cord is a minimum of 12/3 AWG and less than 50ft in length. Using 14/3, 16/3 or 18/3 cords will **void the warranty** and damage the motors.

This trimming machine and vacuum are **220V**. You may need to consult a qualified electrician for making 220V connections. Make sure trimmer and vacuum will not overload circuit(s).

Do not overload electrical outlets. Failure to comply with electrical code could result in fire or electrical shock. It's best to have a dedicated circuit for the machine. Consult an electrical contractor for assistance.

Trimmer startup

Before plugging the machine into the power receptacle it's very important to make sure all the shrouds are in place and the reel blade spins freely every day. Please refer to page 13-16 of this manual then continue with this procedure.

Move the Zoom into position on a somewhat flat surface and adjust the jacks accordingly on each side with the hand cranks to get the correct barrel slope and levelness from side to side for the hopper. This will anchor the machine in place and allow you to set the speed of travel with the machine angle and barrel rotation speed control. Refer to figure 1.9.



Figure 1.9

On/Off & Barrel Speed Control

Once the machine is installed correctly make sure the reel spins freely. With the power disconnected remove the reel v-belt guard and rotate the pulley/belt by hand to make sure it turns freely. Reinstall the belt guard with the two screws.

Connect the vacuum hose(s) up to the machine discharge outlet and the vacuum side. Make sure you have the designated top vacuum bags 12x24 for proper air flow. The bottom bag type will depend on cutting wet or dry material.

Connect the machine cord to the correct power circuit. Plug the vacuum on a separate circuit.

Note:

We have equipped this machine with a 220V 3hp vacuum for the best performance and lowest amperage. You may need to consult a qualified electrician for making a 220V connection. Make sure hands and other objects are clear of the machine before beginning startup.

Step 1:

Toggle the trimmer **REEL** motor switch **ON/OFF**. (Labeled **REEL**) to make sure it's running smoothly before proceeding. Press the switch again and leave the reel blades running.

Step 2:

Proceed with the **BARREL** motor switch (Labeled **BARREL**) by toggling the switch **ON/OFF**. Press the switch again and leave the barrels running.

Step 3:

Adjust the barrel speed knob to the medium position for beginning.

Step 4:

Turn on the vacuum system.

Trimmer startup:

Keep in mind that the trimmer will have specific noises with it has been properly adjusted. Factory setting and adjustments may change in shipping. The operator should become familiar with the sounds and characteristics to identify abnormal sounds so they can be corrected.

The operator can now proceed to feed the hopper with material. Both barrels can receive material at the same time. The material should consistently travel through the barrels and exit the opposite side into a clean container. You may need to adjust the trimmer angle with the jacks as the machine is running to find the proper material flow rate.

All materials cut differently so we have designed the trimmer to be precisely adjusted with the adjustable barrels speed and trimmer jacks for proper material flow.

Cleaning instructions

A thorough cleaning of the trimmer should be done at the end of every day with interval barrel cleaning during the day depending on usage. Material buildup can cause poor performance, overheating of motors and possible damage to motors at startup. Recommended cleaning will ensure proper performance and extend life of the trimmer. As the material residue dries it will become hard and more difficult to remove. Be extremely careful and never slide your fingers along the reel cutter or blade lengthwise.

Warning!

All cleaning must be done when the machine power is disconnected and unplugged.

High Pressure Water Cleaning (<2,000psi)

High pressure water cleaning (under 2,000psi) is the most efficient way to clean the trimmer. Carefully remove the barrels, side and top shrouds and leave the bottom vent cover in place. This will help keep the motors from getting wet. Cover motors with plastic bags and start spraying the brushes; do not get too close to the bristles. Once brushes are first then move down to the reel blades and lower shroud. Use a block of wood to rotate the reel blades for complete cleaning then spray the lower shroud. Keep direct spray away from the motors and electrical box. These items can get wet but should not be directly sprayed. You can then remove the lower with vents and clean it completely. Proceed and clean the remaining shrouds separately. Carefully spray the barrels and reassemble all the parts in reverse order.

Cleaning without high pressure water

Remove the top, side shrouds and barrels. Spray Simple Green on barrels, reel blades and brushes and let soak for a short time. Clean the barrels with brush and water. Carefully use a plastic scraper to remove material residue buildup on reel blades and stationary blades.

Barrels

Barrels can be soaked in a garbage can or large bin with Simple Green for one hour and sprayed with a water hose. Be extremely careful with handling the barrels, as they are easy to damage. Any damage to the barrels will greatly affect the cutting performance of the trimmer.

Bushes

The brushes can be sprayed with Simple Green or bathroom cleaning with bleach then hosed off. High-pressure washer may damage bristles if sprayed too close.

General Maintenance

Maintenance will depend on the amount of use the machine is operated. This will describe what you should do if the machine is used on a daily bases.

Warning!!!

General maintenance should only be done when the machine power is disconnected with no exceptions.

Grease lubrication

The brush bearings with grease fitting should be greased once per year.

Adjustment

The cutting reel and each barrel should be check for damage each day and adjustments made as necessary before cutting.

Note:

Operating the machine with damaged blades could result in further damage or personal injury. An authorized technician or the manufacture must repair damage.

Cleaning

A thorough cleaning of the machine should be done on a daily basis. Material buildup can cause poor performance, overheating and hard startup for later use. As the residue dries it will become hard and more difficult to remove. Be extremely careful to avoid sliding your fingers along the blade lengthwise. Refer to the cleaning section of this manual on pages 10 - 11.

Vacuum maintenance

Change or empty the bottom debris bag daily on the vacuum. Keeping the top bags clean for maximum airflow will give you the best performance possible. Disconnect power before cleaning around impeller for heavily used vacuums.

Trimmer Cutting Adjustments

There are very few adjustments that will need to be made on this machine over time. These machines have been adjusted and tested at the factory before being shipped. You may need to check and readjust the blades as necessary over prolonged use. To do this it will need to be done by a person that understands how this works, as this is a very precision machine and can be damaged if done incorrectly.

Warning!

The following should only be done when the machine is disconnected from the power. Never slide fingers down edges of the blades lengthwise, as they are extremely sharp and dangerous.

Stationary Blade Adjustment

Remove the shrouds around the barrels then remove both barrels from the machine to access the 2 blades. The machine blades should be completely clean before any adjustments are made.

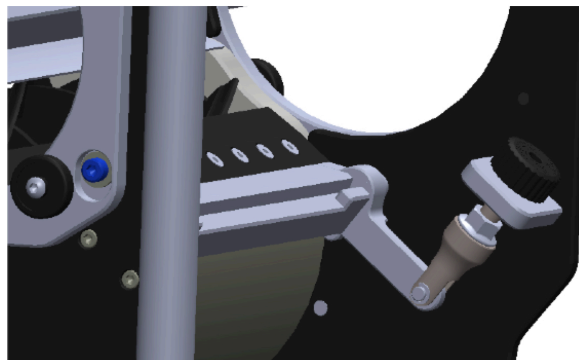


Figure 2.0

Locate the adjustment screw handles for each blade end. Only attempt to adjust one blade at a time. It's best to adjust the blade away from the reel to make sure it spins freely. To do this you will need to unloosen the lock nut below the knob and turn the adjustment knob counter clockwise 3 or 4 notches on both sides of the same blade until the reel turns freely. Once it spins freely insert the paper.

Slowly turn the adjustment knob clockwise one notch at a time on each end of the blade while checking for paper tightness while turning the reel. Refer to figure 2.1 for paper position. Once the paper is touching then tighten the lock nuts under the knobs and proceed onto the next blade.

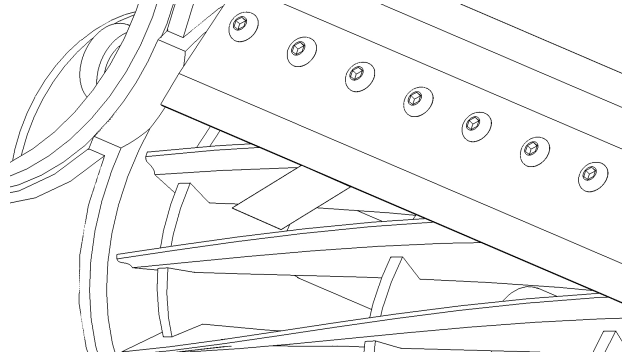


Figure 2.1

Paper inserted from the front side.

Check for light contact force on both sides of the reel on the paper like in figure 2.1. Adjust each side until the paper is lightly pinched. Remove the paper and turn the blade with a block of wood. You should not feel or hear any contact with the reel blade.

Assembly the guards, plug the machine into the power cord and turn on the reel motor. If you hear any ticking or noise adjust the side causing the contact until it goes away.

This can be adjusted while the machine is running very carefully without paper. Find the correct blade end that may be rubbing, loosen lock nut and adjust the thumb wheel a few notches to move blade away from the reel blade then retighten lock nut. Repeat as necessary until machine runs quite.

Any damage to the blades may make proper adjustment not possible. The self-sharpening blades cannot correct damage on the reel blades. An authorized service technician must replace damage to the reel blades.

Once adjustment has been completed you will need to ensure the reel spins freely. There should be no drag or contact on the blades when running. Everything must be clean for proper adjustment. You may need to readjust it once you turn the motor on for no contact to the reel.

Replace the protective shrouds and barrels. Install the barrel belt and swing the barrel-bearing block down in place. Proceed to the initial startup procedure. You should get no sounds from the blades or barrel for any contact when running.

Barrel adjustment

Barrel adjustment has been set at factory before shipping but may change in shipping. If necessary unloosen the three barrel plate screws and turn the bottom barrel plate adjustment screw clockwise (to the head) to adjust barrel away from reel cutter. Then retighten the three-barrel plate screws to hold barrel/plate in position.

Warning!!!

The tumbler adjustment should only be done when it is certain the power has been disconnected.

The factory has made the closest cutting adjustment possible but you may want to readjust after transporting or lengthen the cut for different materials.

You will need to adjust both ends so the barrel is parallel to the blade for even cutting action. Refer to figure 2.3 and begin loosening locknut labeled #6 & #7 on each end. Turn the barrel adjustment bolts counter clockwise to raise the tumbler. Once you have reached the desired space between reel and barrel re-tighten the 3bolts per plate on each end .

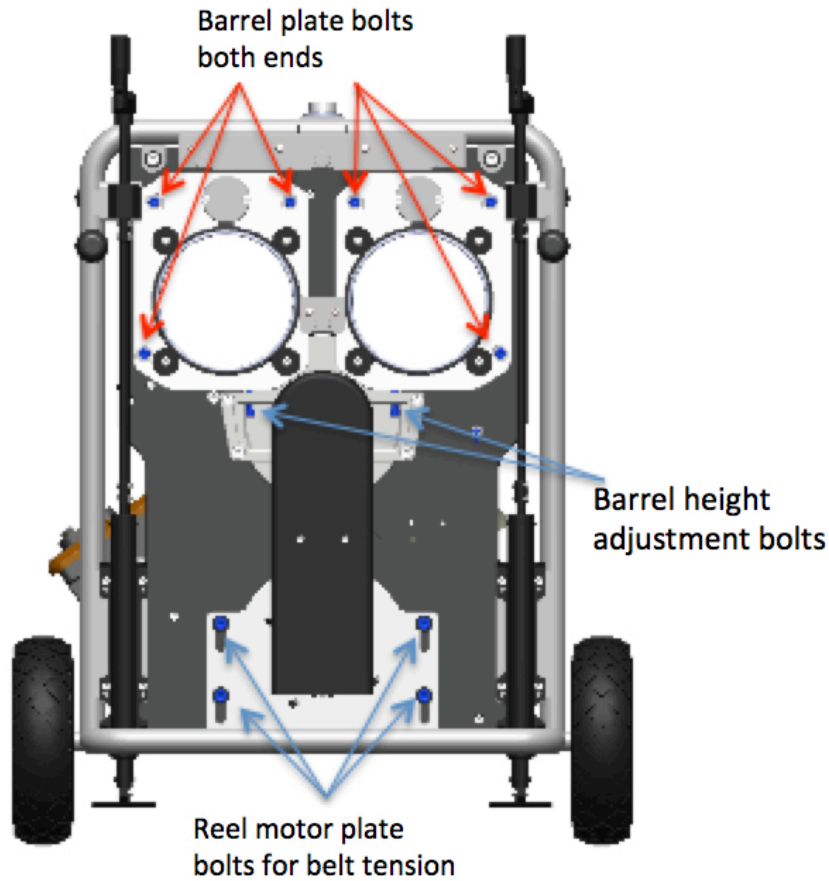
Proceed to the opposite barrel side and follow the same procedure as you did on the first barrel.

Note:

Make sure to turn the barrel by hand before applying power. This is a good check to see if there are any problems before applying power to make sure it spins freely. Once you have done so then turn the barrel power on and make sure it does not rub the reel or stationary blade.

Figure 2.3

End view showing adjustable bolts with hopper off



Notes:

- Ensure that all loosened nuts and bolts are tight before applying power.
- Make sure barrels spins freely before applying power. **Rotate by hand to verify**

Lubrication

This machine has been engineered to run as maintenance free as possible. The reel bearings have been designed and engineered with Zerk fittings for good lubricated. Refer to below directions for greasing. Improper cleaners and cleaning procedures can damage seals and will void warranty.

Simple Green (mild detergent) and denatured alcohol are the recommended cleaners.

For cutting wet material we suggest a periodically very light cold water spray on the barrels and while running the machine to help the surface resist the resin from adhering.

Grease fittings

Brushes

Older machines that have brush bearing Zerk fitting should be lightly greased every 6 months. When you see grease coming out of the bearing seals stop pumping grease gun. The newer machines have bronze sleeves that can be oiled every 6 months.

Reel bearings

The reel Zerk fittings (2) are located on the reel end plates and should be greased after every pressure wash cleaning to help remove any possible moisture from bearings. (Older machines have sealed reel bearing)

Suggested Cutting Tips

- Wet cutting – keep high resin material fresh, cool and wet for cutting
- Always use the short top bags on vacuum for wet and dry trimming for best air flow
- Dry trimming use cloth or plastic bags on vacuum bottom set
- Find the correct material flow rate for each material
- Material density determines material flow rate
- Light materials may take multiple passes
- Keep material in cutting zone with correct barrel speed
- Adjust barrel speed based on density, weight and leaf size
- Vacuum loss will greatly decrease cutting performance and needs to be monitored
- Clean barrel when leaves stick and block barrel slots
- Any foreign matter will damage the reel blades
- Listen for abnormal sounds when running the machine

Reel belt replacement

Remove belt guard by removing the 2 Allen head bolts labeled #4 in figure 2.3. Loosen bolts labeled #3 and lift motor with pulling belt then retighten the one bolt in the upper position and remove belt. Reverse this procedure to install the new belt.

Trouble shooting

Barrel makes grinding noises

This could be due to damage to the tumbler barrel causing it to rub the reel blade. It may need to be adjusted further away from the reel and blade knife.

Barrel motor shakes

This may be due to something in the belt or pulleys causing it to be unbalanced. Check for material adhered to the drive system or pulley using proper safety.

Reel drive motor is very hot

The reel drive motor will get hot after prolonged use. It will shut off automatically if it overheats and will need to cool down before restarting.

There is a high pitch squeal sound coming from the blades

This can be due to the blade rubbing the protective shrouds or covers. Check for damage on shroud covers and if the machine needs cleaning and readjust.

There is a high speed ticking sound coming from the blades

There should be no sounds from the reel being turned on. If your hearing a ticking sound the stationary blade will need to be adjusted so the noise will go away.

Debris is getting clogged up in the vacuum inlet

Clean periodically due to debris buildup of wet or dried material from current or pervious use.

The circuit breaker keeps tripping

This is typically caused by an undersized cord, a cord that is to long or a circuit breaker that is to small. Also check to make sure the machine is not sharing a circuit breaker with other electrical items.

Trouble shooting

The reel motor stops on startup

This is typically caused from using an undersized cord that is too long. This also may be caused by improper belt tension (too tight).

Suction from the vacuum is weak

The suction is critical for proper cutting. Confirm your use of the 12x24 open weave filter bags on the top vacuum. Check to make sure there is no blockage in shroud, hose and around the vacuum housing of the impeller. Clean or change the upper filter bag in the vacuum and make sure all connections are correct. Check the vacuum in the barrels with the trimming machine turned off.

Excess material buildup on the brush & tumbler barrel

Clean brush and barrel more often and apply a light coat of coconut oil to brush to keep the cut material from sticking.

The material comes out of the machine under processed

This may be due to excessive machine angle causing the material to flow too fast through the barrel or not enough vacuum. Check for proper vacuum. Lower the jacks and reduce the machine angle to get the proper flow rate. You may also need to adjust for proper barrel speed for the material being cut.

The reel motor won't start

This is most likely due to hardened residue buildup on the reel blades, poor adjustment or lack of lubricant. Residue left on blades will harden and cause the motor not to start. Clean the reel blades thoroughly.

The start button for the blade lights the LED indicator however the motor will not start.

This is a safety feature that protects the motors. The motor has overheated and needs to cool down to reset. The motor will overheat if the blades need to be cleaned/adjusted or possibly incorrect belt tension. Make sure the problem is resolved before continuing. It may take several minutes to reset.

Trimmer Specifications

Input voltage	220V
Current draw	12A
Weight	300lbs / 136kgs
Length	50.6" / 128.5cm
Width	32.4" / 82.3cm
Width – w/o wheels	25.8" / 65.6cm
Height	37.2" / 94.5cm
Discharge diameters	6" / 15.2cm

Additional Requirements

Extension cords	12/3 AWG (10 AWG or 12AWG) 50ft/15m (max length)
Lubrication	WD-40 or light oil for storage

Transporting & Storage

Tie down

The machine is easy to tie down to the tubular frame. Make sure you anchor low on the machine and your tie downs don't slide making the machine loose in transportation. Have sufficient number of tie downs on the front and back to keep the machine from shifting during transport. Remove the hopper if possible to avoid damage if machine shifts.

Storage

This machine is made with parts that resist corrosion. It's recommended to be lightly sprayed down for additional protection. We recommend storing the machine in a dry place and to make sure to clean the machine thoroughly before storing. Any material left on the machine will harden and become harder to clean over time. Once cleaned and dry it is best to spray the reel blades and blade knives with a thin lubricant like WD-40. Following these steps will ensure smooth startup on the following use.

Store the machine in a safe dry location with all guards and shields installed. Keep it out of reach of children and other unauthorized people.

Manufacturer's Warranty

The manufacture will repair or replace without charge any parts that are proved defective in material or workmanship for a period of one year.

The warranty period will begin from the date the machine is purchased from the initial retailer.

You may be denied warranty coverage if your machine has failed due to abuse, improper maintenance, normal wear, accident or unapproved modifications.

The manufacture assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the product. In no event will the manufacture be liable for any special, incidental or consequential damages (including loss of use, loss of profit and claims of third parties) however caused whether by negligence of the manufacture or otherwise.

If warranty repair is required please contact the manufacture at info@doublebarrelzoom.us to obtain a repair authorization number with the following information.

1. Model and serial number
2. Proof of purchase date
3. A copy of the original Warranty Registration Card
4. Details of the defect or problem.

The machine or defective parts must be returned to the manufacture for analysis and replacement.

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Please contact the manufacture with any questions on warranty at info@doublebarrelzoom.us.