

DELTA 23-206 Variable Speed Grinder



DELTA 23-206 Variable Speed Grinder User Manual

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DELTA 23-206 Variable Speed Grinder



Specifications

- **Motor:** 2.5 amp, 120V, 1 phase (Model 23-206) / 5 amp, 120V, 1 phase (Model 23-207)
- **Wheel Speed:** 2,000 to 3,400 rpm
- **Wheel Grit:** 36 (coarse), 60 (medium)
- **Wheel (diameter x thickness):** 6 inch x 3/4 inch (Model 23-206) / 8 inch x 1 inch (Model 23-207)
- **Dimensions (LxWxH) (excludes lamp):** 15 5/8 inch x 10 inch x 11 3/4 inch (Model 23-206) / 16 1/2 inch x 10 3/4 inch x 13 1/4 inch (Model 23-207)
- **Base Footprint (LxW):** 8 3/4 inch x 6 1/4 inch (Model 23-206) / 9 3/4 inch x 6 1/2 inch (Model 23-207)
- **Shaft Diameter:** 1/2 inch (Model 23-206) / 5/8 inch (Model 23-207)
- **Tool Weight:** 27lbs (Model 23-206) / 41lbs (Model 23-207)

Product Usage Instructions

Safety Precautions

Before using the Variable Speed Grinder, thoroughly read and understand all safety instructions provided in the manual to prevent serious injury or property damage.

Assembly

Follow the assembly instructions provided in the manual to correctly set up the grinder with components such as the wheel guard, grinding wheel, tool rest, eye shield, and coolant tray.

Power Connection

Ensure that the grinder is connected to a suitable power outlet as per the power connections guidelines mentioned in the manual.

Operating the Grinder

Turn on the grinder using the on/off switch with a lock-out key. Adjust the variable speed control to set the desired speed for your grinding needs. Use the adjustable tool rest to support your workpiece during operation.

Maintenance

Regularly inspect and maintain the grinder as per the maintenance instructions provided in the manual to ensure

optimal performance and longevity.

FAQ

Q: What should I do if I have questions or concerns about using the grinder?
A: If you have any doubts or queries regarding the usage of the tool or contents of the manual, please discontinue use and contact Customer Care at 1-800-223-7278 for assistance.

WARNING

To reduce risk of serious injury, thoroughly read and comply with all warnings and instructions in this manual and on product.
KEEP THIS MANUAL NEAR YOUR GRINDER FOR EASY REFERENCE AND TO INSTRUCT OTHERS.

FEATURES

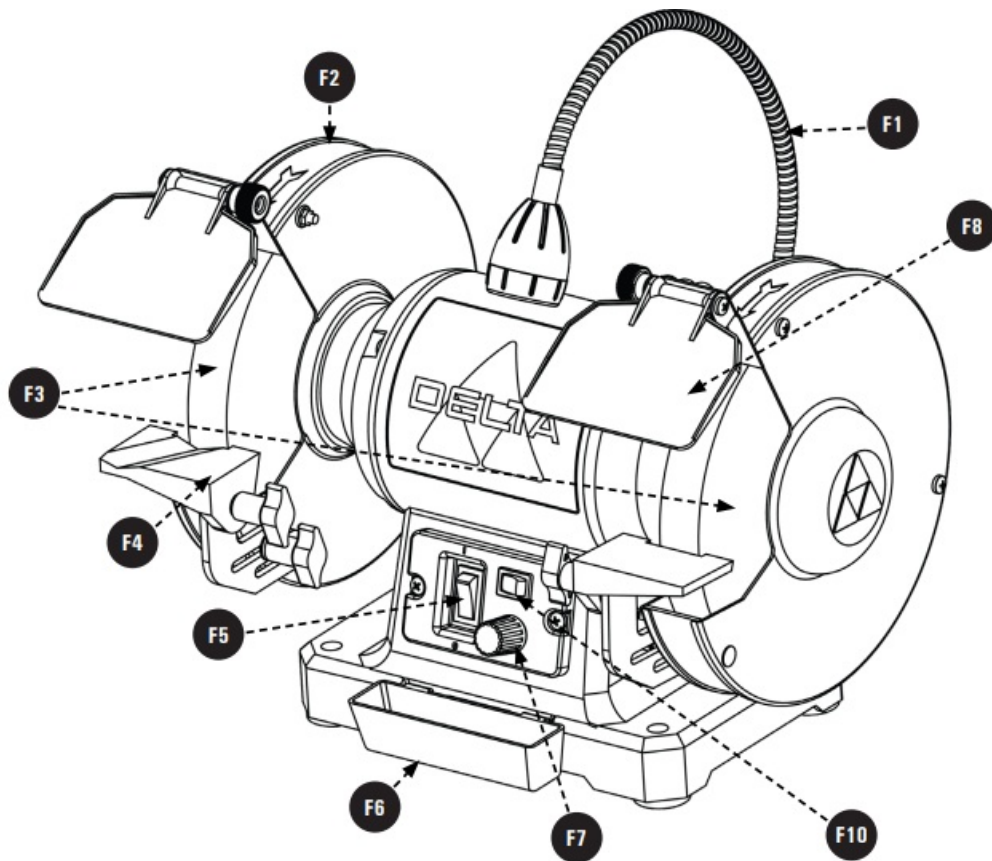
The DELTA® 23-206 is a 6 inch Variable Speed Grinder and the DELTA® 23-207 is an 8 inch Variable Speed Grinder. They offer superior performance in grinding and sharpening operations and with the proper accessories, allows the user to remove rust and buff or polish metal. This model comes with a flexible lamp, adjustable tool rests, quick release arbor nut system, and two large eye shields for added safety.

NOTE: The manual cover illustrates the current production model. All other illustrations contained in the manual are representative ONLY and may not be exact depictions of the actual labeling or accessories included. They are intended for illustrative purposes ONLY.

SPECIFICATIONS

	MODEL 23-206	MODEL 23-207
Motor:	2.5 amp, 120V, 1 phase	5 amp, 120V, 1 phase
Wheel Speed:	2,000 to 3,400 rpm	2,000 to 3,400 rpm
Wheel Grit:	36 (coarse), 60 (medium)	36 (coarse), 60 (medium)
Wheel (diameter x thickness):	6 inch x 3/4 inch	8 inch x 1 inch
Dimensions (LxWxH) (excludes lamp):	15 5/8 inch x 10 inch x 11 3/4 inch	16 1/2 inch x 10 3/4 inch x 13 1/4 inch
Base Footprint (LxW):	8 3/4 inch x 6 1/4 inch	9 3/4 inch x 6 1/2 inch
Shaft Diameter:	1/2 inch	5/8 inch
Tool Weight:	27lbs	41lbs

FEATURES



- F1 Flexible LED work lamp
- F2 Wheel Guard
- F3 Aluminum oxide grinding wheel
- F4 Adjustable tool rest
- F5 On/Off switch with lock-out key
- F6 Coolant Tray
- F7 Variable speed control
- F8 Adjustable eye shield
- F9 Dressing Tool Storage (On base of grinder, in rear)
- F10 Light Switch

IMPORTANT SAFETY INSTRUCTIONS

WARNING

CAREFULLY READ AND FOLLOW ALL WARNINGS AND INSTRUCTIONS ON YOUR PRODUCT AND IN THIS MANUAL. SAVE THIS MANUAL. MAKE SURE ALL USERS ARE FAMILIAR WITH ITS WARNINGS AND INSTRUCTIONS WHEN USING THE TOOL. Improper operation, maintenance or modification of tools or equipment could result in serious injury and/or property damage.

SAFETY SYMBOLS-DEFINITIONS

If you have any questions or concerns regarding the use of your tool or the contents of this manual, please stop using the tool and contact Customer Care at 1-800-223-7278.

Safety is a combination of common sense, staying alert and knowing how your Variable Speed Grinder works. Read this manual to understand this grinder. It is important for you to read and understand this manual. The information it contains relates to protecting YOUR SAFETY and PREVENTING PROBLEMS. The symbols below

are used to help you recognize this information.

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTICE Indicates a practice not related to personal injury which, if not avoided, may result in property damage.







Before Using The Grinder:

WARNING

To reduce the risk of mistakes that could cause serious, permanent injury, do not plug the grinder in until the following steps are completed:

- Assembly. See pages 10-11.
- Learn the use and function of the ON-OFF switch. See page 12.
- Review and understanding of all safety instructions and operating procedures in this manual.
- Review of the maintenance methods for this grinder. See page 13.

Some of the following symbols may be used on the tool. Please study them and learn their meaning. Proper interpretation on these symbols will allow you to operate the tool better and safer.

SYMBOL	NAME	DESIGNATION/EXPLANATION
	Safety Alert	Indicates a potential personal injury hazard.
	Read Operator's Manual	To reduce the risk of injury, user must read and understand operator's manual before using this product.
	Eye Protection	Always wear eye protection with side shields marked to comply with ANSI Z87.1.
	No Hands Symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	Wet Conditions Alert	Do not expose to rain or use in damp locations.
	Pinch Warning	Always watch for movement paying extra attention to potential areas where pinching could occur.
V	Volts	Voltage
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
min	Minutes	Time
~/AC	Alternating Current	Type of current
n_0	No Load Speed	Rotational speed, at no load
.../min	Per Minute	Revolutions, strokes, surface speed, orbits, etc., per minute
Lbs	Pounds	Unit of weight
Kg	Kilograms	Unit of weight
RPM	Revolutions Per Minute	Speed of rotation of machine
PH:1	Phase 1	This is a 1 phase motor

GENERAL SAFETY RULES

WARNING

Failure to follow these rules may result in serious personal injury.

1. For your own safety, read the instruction manual before operating the machine. Learning the machine's application, limitations, and specific hazards will greatly minimize the possibility of accidents and injury.
2. ALWAYS USE SAFETY GLASSES. Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses. Use certified safety equipment. Eye protection equipment should comply with ANSI Z87.1 standards. Hearing equipment should comply with ANSI S3.19 standards.
3. Wear proper apparel. Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip protective footwear is recommended. Wear protective hair covering to contain long hair.
4. Do not use the machine in a dangerous environment. The use of power tools in damp or wet locations or in rain can cause shock or electrocution. Keep your work area well-lit to prevent tripping or placing arms, hands, and fingers in danger.
5. Do not operate electric tools near flammable liquids or in gaseous or explosive atmospheres. Motors and switches in these tools may spark and ignite fumes.
6. Maintain all tools and machines in peak condition. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories. Poorly maintained tools and machines can further damage the tool or machine and/or cause injury.
7. Check for damaged parts. Before using the machine, check for any damaged parts. Check for alignment of moving parts, binding of moving parts, breakage of parts, and any other conditions that may affect its operation. A guard or any other part that is damaged should be properly repaired or replaced with DELTA® or factory authorized replacement parts. Damaged parts can cause further damage to the machine and/or injury.
8. Keep the work area clean. Cluttered areas and benches can be a contributing factor to accidents in the shop.
9. Keep children and visitors away. Your shop is a potentially dangerous environment. Children and visitors can be injured.
10. Reduce the risk of unintentional starting. Make sure that the switch is in the "OFF" position before plugging in the power cord. In the event of a power failure, move the switch to the "OFF" position. An accidental start-up can cause injury. Do not touch the plug's metal prongs when unplugging or plugging in the cord.
11. Use the guards. Check to see that all safety devices are in place, secured, and working correctly to prevent injury.
12. Remove adjusting keys and wrenches before starting the machine. Tools, scrap pieces, and other debris can be thrown at high speed, causing injury.
13. Use the right machine. Don't force a machine or an attachment to do a job for which it was not designed. Damage to the machine and/or injury may result.
14. Use recommended accessories. The use of accessories and attachments not recommended by DELTA® may cause damage to the machine or injury to the user.
15. 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. See the Extension Cord Chart on page 8 for the correct size depending on the cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
16. Secure the workpiece. Use clamps or a vise to hold the workpiece when practical. Loss of control of a

workpiece can cause injury.

17. Feed the workpiece against the direction of the rotation of the blade, cutter, or abrasive surface. Feeding it from the other direction will cause the workpiece to be thrown out at high speed.
18. Do not force the workpiece on the machine. Damage to the machine and/or injury may result.
19. Do not overreach. Loss of balance can make you fall into a working machine, causing injury.
20. Never stand on the machine. Injury could occur if the tool tips, or if you accidentally contact the cutting tool.
21. Never leave the machine running unattended. Turn the power OFF. Don't leave the machine until it comes to a complete stop. A child or visitor could be injured.
22. Turn the machine "OFF", and disconnect the machine from the power source before installing or removing accessories, changing cutters, adjusting or changing set-ups. When making repairs, be sure to lock the start switch in the "OFF" position. An accidental start-up can cause injury.
23. Make your workshop childproof with padlocks, master switches, or by removing starter keys. The accidental start-up of a machine by a child or visitor could cause injury.
24. Stay alert, watch what you are doing, and use common sense. Do not use the machine when you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in injury.

Warning

Use of this tool can generate and disperse dust or other airborne particles, including wood dust, crystalline silica dust and asbestos dust. Direct particles away from face and body. Always operate tool in well ventilated area and provide for proper dust removal. Use dust collection system wherever possible. Exposure to the dust may cause serious and permanent respiratory or other injury, including silicosis (a serious lung disease), cancer, and death. Avoid breathing the dust, and avoid prolonged contact with dust. Allowing dust to get into your mouth or eyes, or lay on your skin may promote absorption of harmful material. Always use properly fitting NIOSH/OSHA approved respiratory protection appropriate for the dust exposure, and wash exposed areas with soap and water.

1. DO NOT operate this machine until it is completely assembled and installed according to the instructions. A machine incorrectly assembled can cause serious injury.
2. OBTAIN ADVICE from you supervisor, instructor, or another qualified person if you are not thoroughly familiar with the operation of this machine.
3. FOLLOW ALL WIRING CODES and recommended electrical connections to prevent shock or electrocution.
4. ALWAYS USE THE PROVIDED BLOTTER and wheel flanges to mount the grinding wheels on the grinder shaft to prevent wheel damage or accidental separation. Separation can result in fragments flying off the wheel at high speeds.
5. USE ONLY WHEELS suitable for the speed of the machine. Unsuitable grinding wheels can come apart, throwing fragments out at high speeds.
6. USE ONLY WHEELS that have a bore exactly equal to the arbors of the machine. Never attempt to machine an undersized wheel to fit an arbor. Unsuitable grinding wheels can come apart, throwing fragments out at high speeds.
7. DO NOT overtighten wheel nut.
8. DO NOT USE A WHEEL THAT VIBRATES. Dress the grinding wheel, replace it, or replace the bearings of the shaft. Unsuitable grinding wheels can come apart, throwing fragments at high speeds.
9. INSPECT WHEELS before starting the machine for cracks or fragments. REPLACE DAMAGED WHEELS immediately. Parts of the wheel can be thrown at high speeds causing serious injury.
10. ADJUST EYE SHIELDS close to the the grinding wheel, and re-adjust as the wheel wears down. Flying sparks

are dangerous and can cause fires or explosions.

11. ALWAYS MAKE SURE the eye shields are in place, properly adjusted, and secured.
12. ADJUST TOOL RESTS close to the grinding wheel (1/8 inch separation or less). Tighten the tool rest securely to prevent shifting positions, and re-adjust as the wheel wears down. The workpiece can be drawn into the wheel causing damage to the workpiece and/or serious injury.
13. STAND TO ONE SIDE before turning the machine "ON". Loose fragments or wheel parts could fly from the wheel at high speeds.
14. NEVER GRIND ON A COLD WHEEL. Run the grinder for one full minute before applying the workpiece. A cold wheel has a tendency to chip. Those fragments could fly from the wheel at high speeds.
15. NEVER START THE MACHINE with the workpiece against the grinding wheel. The workpiece can be drawn into the wheel, causing damage to the machine and/or serious injury.
16. CLEAN THE MACHINE thoroughly when processing different types of workpieces (wood, steel, or aluminum). Combining wood and metal dust can create an explosion or fire hazard. DO NOT GRIND or polish magnesium. Fire will result.
17. NEVER GRIND NEAR FLAMMABLE GAS OR LIQUIDS. Sparks can create a fire or an explosion.
18. AVOID awkward operations and hand positions. A sudden slip could cause a hand to move into the grinding wheel.
19. KEEP ARMS, HANDS, and fingers away from the wheel. The abrasive surfaces can cause serious injury.
20. HOLD THE WORKPIECE FIRMLY against the tool rest. Loss of control of the workpiece can cause serious injury.
21. DRESS THE WHEEL on the face only. Dressing the side of the wheel could cause it to become too thin for safe use.
22. GRIND A WORKPIECE using the face of the grinding wheel only. Loss of control of the workpiece can cause serious injury.
23. NEVER APPLY COOLANT directly to the grinding wheel. Coolant can weaken the bonding strength of the grinding wheel and cause it to fail. Dip the workpiece in water to cool it.
24. DO NOT TOUCH the ground portion of a workpiece until it has cooled sufficiently. Grinding creates heat.
25. PROPERLY SUPPORT LONG OR WIDE WORKPIECES. Loss of control of the workpiece can cause serious injury.
26. NEVER PERFORM LAYOUT, assembly, or set-up work on the table/work area when the machine is running. A sudden slip could cause a hand to move into the wheel. Severe injury can result.
27. TURN THE MACHINE "OFF", disconnect the machine from the power source, and clean the table/work area before leaving the machine. Lock the switch in the "OFF" position to prevent unauthorized use. Someone else might accidentally start the machine and cause serious injury to themselves.
28. ADDITIONAL INFORMATION regarding the safe and proper operation of power tools (i.e. a safety video) is available from the Power Tool Institute, 1300 Sumner Avenue, Cleveland, OH 44115-2851 (www.powertoolinstitute.com). Information is also available from the National Safety Council, 1121 Spring Lake Drive, Itasca, IL 60143-3201. Please refer to the American National Standards Institute ANSI 01.1 Safety Requirements for Woodworking Machines and the U.S. Department of Labor OSHA 1910.213 Regulations.

PROPOSITION 65 WARNING

Warning

Dust created by power sanding, sawing, grinding, drilling, and other construction activities may contain chemicals

known to the state of California to cause cancer, birth defects or other reproductive harm. Some examples are:

- Lead from lead-based paints
- Crystalline silica from bricks and cement and other masonry products
- Asbestos dust
- Arsenic and chromium from chemically-treated lumber

Your risk from these exposures varies depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well-ventilated area and work with approved safety equipment, such as dust masks that are specifically designed to filter out microscopic particles.

Avoid prolonged contact with dust from power sanding, sawing, grinding, drilling, and other construction activities. Wear protective clothing and wash exposed areas with soap and water.

SAVE THESE INSTRUCTIONS

Refer to them often and use them to instruct others. • If tool is loaned to someone, also loan them these instructions.

POWER CONNECTIONS

POWER SOURCE

This saw is equipped with a 2.5A (23-206)/5.0A (23-207) motor for use with a 120-volt, 60-HZ alternating current. See instructions below regarding proper connections for your saw as wired.

For voltage, the wiring in a shop is as important as the motor's rating. A line intended ONLY for lights may not be able to properly carry the current needed for a power tool motor; wire that is heavy enough for a short distance may be too light for a greater distance; and a line that can support one power tool may not be able to support two or three.

A separate electrical circuit should be used for your machines. This circuit should be protected by a 15 amp circuit breaker or 15 amp time lag fuse. If an extension cord is used, use ONLY 3-wire extension cords which have 3-prong grounding-type plugs and matching receptacle which will accept the machine's plug. Before connecting the machine to the power line, make sure the switch is in the "OFF" position and be sure that the electric current is of the same characteristics as indicated on the machine. A substantial voltage drop will cause a loss of power and overheat the motor. It may also damage the machine.

DANGER

DO NOT EXPOSE THE MACHINE TO RAIN OR OPERATE THE MACHINE IN DAMP LOCATIONS.

Your machine is wired for 120 volts, 60 HZ alternating current. Before connecting the machine to the power source, make sure the switch is in the "OFF" position.

GROUNDING INSTRUCTIONS

DANGER

This machine must be grounded while in use to protect the operator from electric shock.

All grounded, cord-connected machines:

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This machine is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DO NOT modify the plug provided – if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in risk of electric shock. The conductor with

insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, DO NOT connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the machine is properly grounded.

Use ONLY 3-wire extension cords that have 3-prong grounding type plugs and matching 3-conductor receptacles that accept the machine’s plug.

Repair or replace damaged or worn cord immediately.

DANGER

In all cases, make certain that the receptacle in question is properly grounded. If you are not sure, have a qualified electrician check the receptacle.

ELECTRICAL CONNECTION

This tool has a precision-built electric motor. It should be connected to a POWER SUPPLY THAT IS 120 VOLTS, 60 HZ, AC ONLY (NORMAL HOUSEHOLD CURRENT in the U.S. and Canada). DO NOT operate this tool on direct current (DC). A substantial voltage drop will cause a loss of power and the motor will overheat. If the tool does not operate when plugged into an outlet, double-check the power supply.

EXTENSION CORDS

When using a power tool at a considerable distance from a power source, be sure to use an extension cord that has the capacity to handle the current the tool will draw. An undersized cord will cause a drop in line voltage, resulting in overheating and loss of power. Use the chart to determine the minimum wire size required in an extension cord. ONLY round jacketed cords listed by Underwriter’s Laboratories (UL) should be used.

NOTE: Before using any extension cord, inspect it for loose or exposed wires and cut or worn insulation.

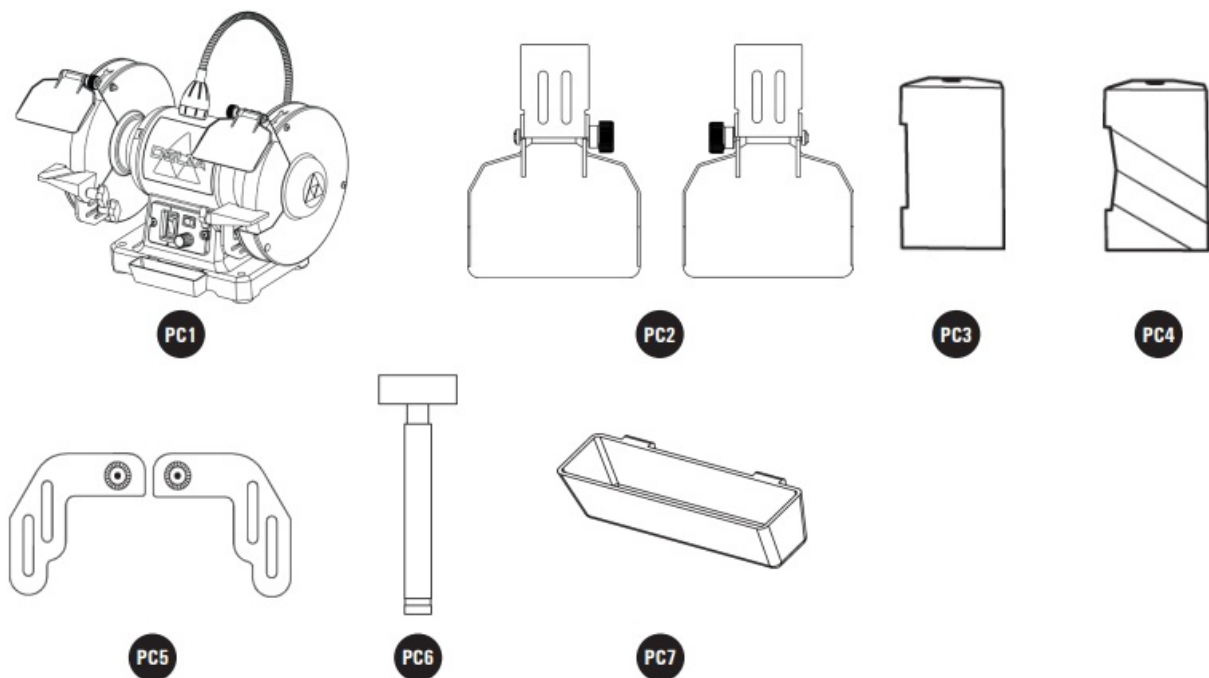
WARNING

KEEP the extension cord clear of the work area. Position the cord so that it will not get caught on lumber, tools or other obstructions while you are working with a power tool. Failure to do so can result in serious personal injury. Check extension cords before each use. If damaged replace immediately. NEVER use tool with a damaged cord, since touching the damaged area could cause electrical shock resulting in serious injury.

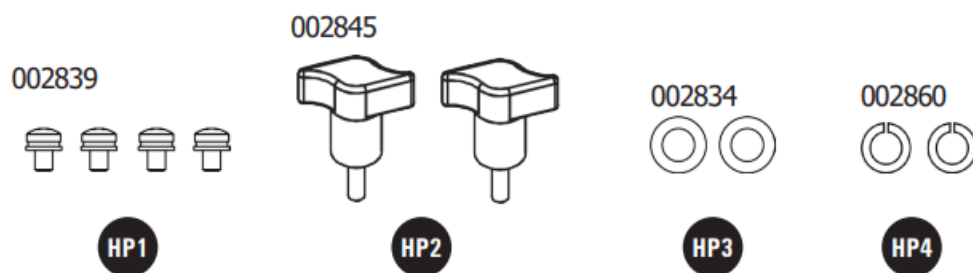
Ampere rating (on total data label) 5A and less	
Cord Length	Wire Size
25'	16 AWG
50'	16 AWG
Used on 12 gauge – 20 amp circuit	
NOTE: AWG = American Wire Gauge	

UNPACKING

Compare all parts to the list below and check that all parts are present and in good condition. Report any missing or damaged parts to your distributor or dealer. Prior to tool assembly and use, read this manual thoroughly to familiarize yourself with proper assembly, maintenance and safety procedures.



- **PC1** 23-206 6 inch Grinder or 23-207 8 inch Grinder
- **PC2** Eye Shield/Spark Shield Assembly (2)
- **PC3** Flat Tool Rest (1)
- **PC4** Beveled Tool Rest (1)
- **PC5** Tool Rest Supports (2)
- **PC6** Wheel Dressing Tool (1)
- **PC7** Coolant Tray (1)



HARDWARE PACKAGE

- **HP1** M5 x 8 Spring Pad Flat Pad Combination Parts (4)
- **HP2** M6 x 17 Handle (2)
- **HP3** Flat Washer D6 (2)
- **HP4** Spring Washer D6 (2)

Remove any protective materials and coatings from all of the parts and the tool. The protective coatings can be removed by spraying WD-40 on them and wiping it off with a soft cloth. This may need redone several times before all of the protective coatings are removed completely.

WARNING

If any parts are missing, do not attempt to plug in the power cord and turn “ON” the machine. The machine should only be turned “ON” after all the parts have been obtained and installed correctly.

ASSEMBLY

ATTACH SPARK SHIELD AND EYE SHIELD

1. Tighten the Eye Shield/Spark Shield Assembly **PC2** to grinder with M5 x 8 Spring Pad Flat Pad Combination Parts **HP1** using a Philips screwdriver.

See Figure 1.

NOTE: Adjust eye shield to appropriate distance from tool rest avoiding interference when operation.

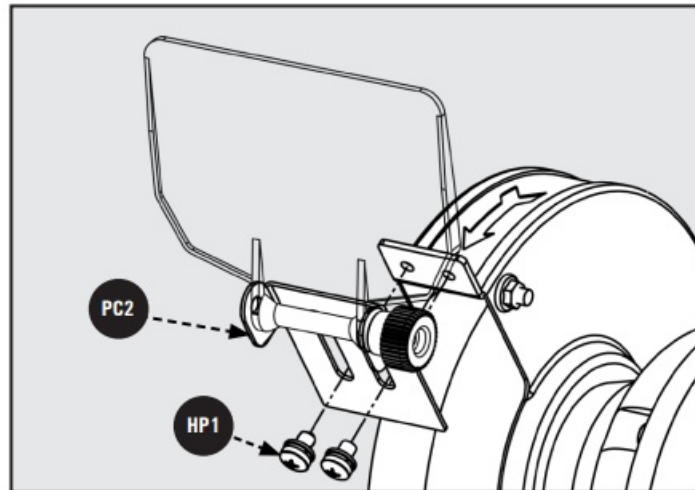


Figure 1

ATTACH TOOL REST

1. Remove the knob **B** , lock washer, and flat washer from the carriage bolt on the lower portion of wheel guard.
Using the carriage bolt, lock washer, flat washer and knob, attach the tool rest supports **PC5** to the inside of the wheel guard as shown.
2. Attach beveled tool rest **PC4** to the tool rest support using one M6 x 17 Handle **HP2** , Spring Washer D6 **HP4** , and Flat Washer D6 **HP3** .
3. Adjust the position of the tool rest support so that the tool rest is approximately 1/8 inch from the grinding wheel **A** .
4. Repeat above steps for second tool rest.

See Figure 2.

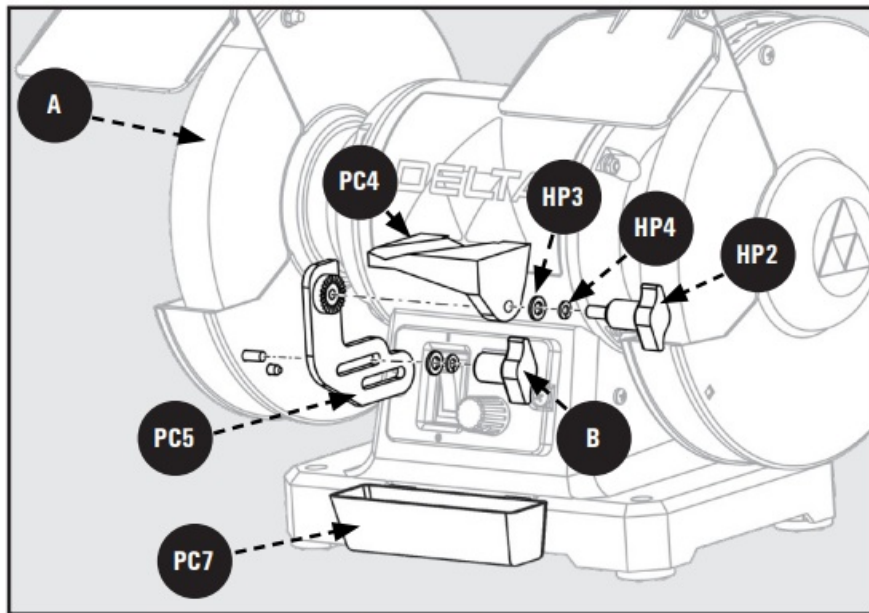


Figure 2

ATTACH COOLANT TRAY

1. Attach Coolant Tray **PC7** to the grinder by sliding it onto the bracket located on the front of the grinder.
See Figure 2.

TOOL STORAGE

Your DELTA® 23-206 (6 inch) or 23-207 (8 inch) Grinder has convenient on-board tool storage for the Wheel Dressing Tool **PC7** provided. The tool holder is located on the rear of the grinder base.
See Figure 3.

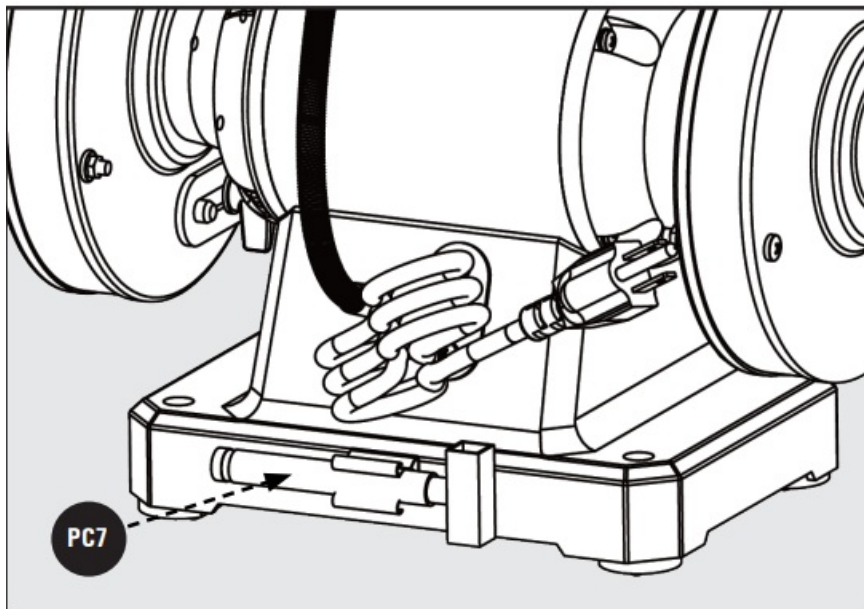


Figure 3

CONFIRM TIGHTNESS OF ARBOR NUTS

Prior to using your grinder for the first time, it is recommended that you check the tightness of the arbor nuts. To check the tightness on the arbor nuts, do the following:

1. Remove the two screws **A** securing the outer face of the wheel guard to the tool frame. You will also need to

remove the long carriage bolt that secures the Tool Rest Support by removing the lower large locking knob.

See Figure 4.

2. Remove guard.

3. Using 24mm wrench, tighten the arbor nut **B** while using the other hand to keep the wheel from moving. Tighten the arbor nut snug.

See Figure 5.

NOTE: The arbor nut on the right side of the machine tightens by rotating it clockwise, the arbor nut on the left side of the machine tightens by rotating it counterclockwise.

4. Re-attach and secure the outer face of the wheel guard to the tool frame using the screws **A** by reversing Step 1.

See Figure 4.

5. Repeat process for other side.

NOTE: As you use your grinder, the force and direction of the wheel will cause the arbor nut to tighten automatically. However, it is recommended that you periodically check the tightness of the nuts as part of your regular tool maintenance.

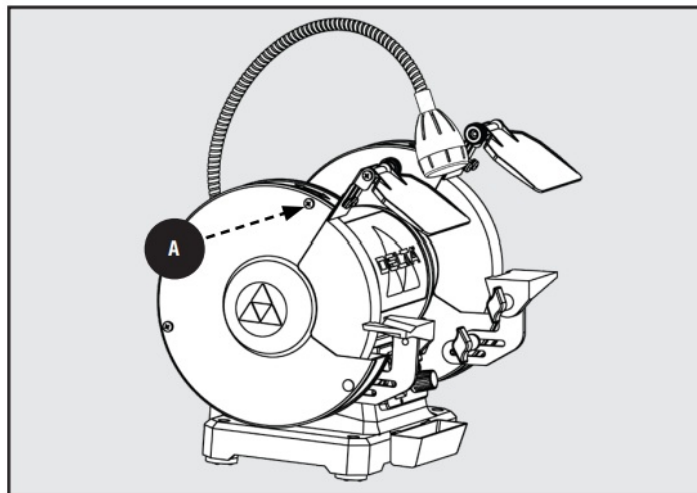


Figure 4

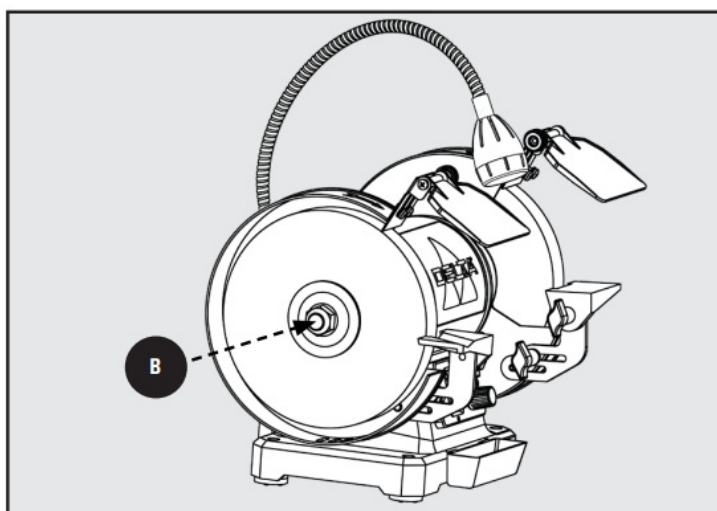


Figure 5

OPERATION

STARTING AND STOPPING

WARNING

Make sure that the ON/OFF switch **A** is in the “OFF” position before plugging cord into outlet.

DO NOT touch the plug’s metal prongs when unplugging or plugging in the cord.

The ON/OFF switch **A** is located on the front of the grinder. To turn the machine “ON”, move the switch up to the “ON” position. To turn the machine “OFF”, move the switch down to the “OFF” position.

See Figure 6.

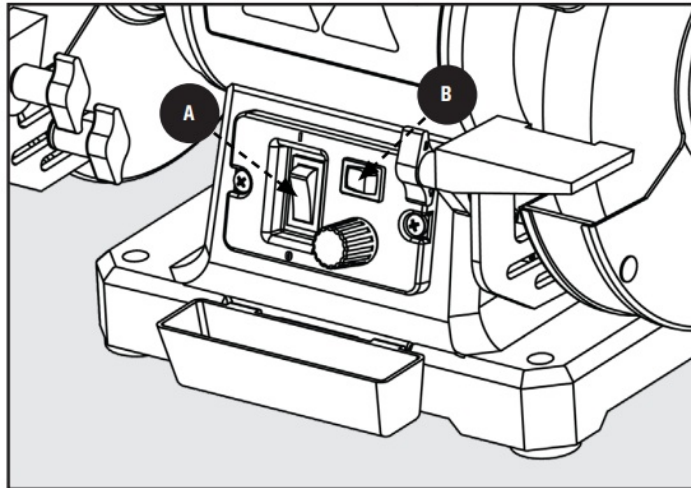


Figure 6

USING THE VARIABLE SPEED CONTROL

The grinder is equipped with a variable speed control, located beside the power switch. When the variable speed control knob is positioned at the far left position (counterclockwise), the RPM is 2,000. The rotation increases when the variable speed control knob is turned clockwise. In the far right position, the RPM is 3,400.

USING THE FLEXIBLE LAMP

The Flexible LED lamp operates independently of the grinder. To turn the lamp ON and OFF, press the switch **B** as indicated on the front panel.

See Figure 6.

MAINTENANCE

GRINDING WHEELS

WARNING

The use of accessories and attachments not recommended by DELTA® may result in a risk of injury. Grinding wheels used with this grinder should be rated for 3,400 RPM or higher and have a width of 3/4 inch for the 6 inch grinder, and 1 inch for the 8 inch grinder. Grinding wheels for the DELTA® 23-206 must be 6 inch in diameter with a 1/2 inch arbor hole. Grinding wheels for the DELTA® 23-207 must be 8 inch in diameter with a 5/8 inch arbor hole.

CAUTION

Using a wheel that is less than 3/4 inch wide for the 6 inch grinder, or 1 inch wide for the 8 inch grinder, will cause vibration and could damage the machine.

WARNING

ALWAYS maintain a distance of 1/8 inch or less between the grinding wheel and both the tool rest and the spark shields. Adjust the tool rests and spark shields as the grinding wheels decrease in size with use.

The DELTA® 23-206 comes with two 6 inch aluminum oxide grinding wheels (gray).

The DELTA® 23-207 comes with two 8 inch aluminum oxide grinding wheels (gray).

For best results, and to properly maintain the grinding wheels, follow these recommendations:

1. KEEP the wheels properly dressed.
2. DO NOT force the work against a cold wheel. Always run the grinding wheel for one full minute before applying a workpiece to it.
3. Use ONLY balanced wheels with your grinder. Using balanced wheels adds years to the life of the bearings on the grinder. By eliminating the most common source of vibration, your grinding projects will be more accurate.

DRESSING THE WHEELS

Your DELTA® 23-206 (6 inch) Grinder or 23-207 (8 inch) Grinder come with a diamond-based wheel dressing tool included. There is on-board storage for the wheel dressing tool at the rear of the machine for easy access. Use this tool or any other suitable stick-type wheel dressing tool to keep your grinding wheels clean and square.

To dress the wheel, refer to Figure 7 and do the following:

1. Bring the wheel dressing tool **PC7** forward on the tool rest until it just touches the high point on the face of the wheel.
2. Dress the wheel by moving the wheel dressing tool back forth.
3. Repeat this operation until the face of the grinding wheel is clean and the edges are square.

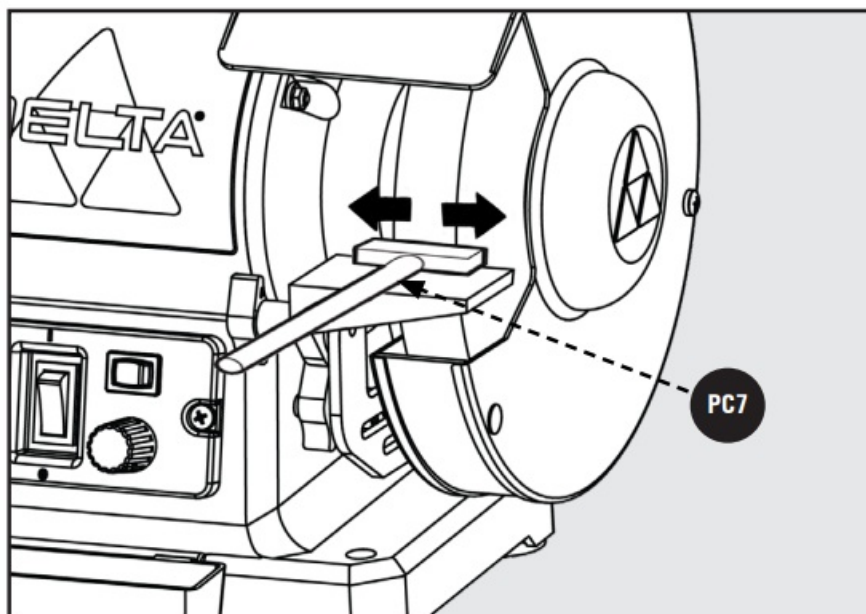


Figure 7

REPLACING OR CHANGING GRINDING WHEELS

WARNING

Disconnect the machine from the power source.

For steps 1-4, refer to Figures 4 & 5 on page 11:

1. Remove the (2) screws and the lower locking knob and carriage bolt that secures the tool rest supports. These secure the outer face of the wheel guard to the tool frame.
2. Remove the guard.
3. Using a 25mm wrench, loosen the arbor nut **A** while using the other hand to keep the wheel from moving.
NOTE: To loosen the arbor nut on the right side rotate it counterclockwise. To loosen the arbor nut on the left side rotate it clockwise.
4. Remove the arbor nut **A** , wheel flange **B** , and old grinding wheel **C** . See Figure 8.
5. Place the new grinding wheel on the arbor.
NOTE: Grinding wheels for the 23-206 must be 3/4 inch wide while grinding wheels for the 23-207 must be 1 inch wide.
6. Place the flange on the arbor and thread the arbor nut on the arbor tighten the arbor nut as tightly as you can by hand.
7. Replace the wheel guard and secure with the (2) screws, carriage bolt, lower locking knob, and tool rest support previously removed in step 1.

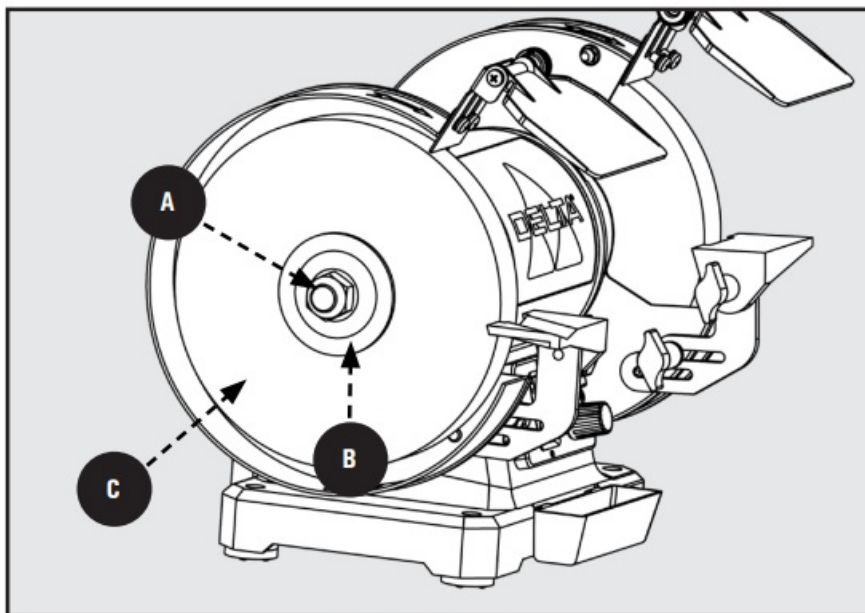


Figure 8

OTHER RECOMMENDED MAINTENANCE

1. Periodically blow out all air passages with dry compressed air. All plastic parts should be cleaned with a soft damp cloth.
NOTICE NEVER use solvents to clean plastic parts. They could possibly dissolve or otherwise damage the material.
2. Periodically inspect the tightness of the arbor nuts.
3. Periodically check tightness on all other hardware and listen for any unusual vibrations while you work as these may be a sign of loose hardware.

TROUBLESHOOTING

For assistance with your machine, visit our website at www.DeltaMachinery.com for a list of service centers or call Delta Power Equipment Customer Care at 1-800-223-7278.

FAILURE TO START

If your machine fails to start, check to make sure the prongs on the cord plug are making good contact in the receptacle, and check reset button on power switch housing. Also, check for blown fuses or open circuit breakers in your power line.

Problem	Possible Cause	Solution
Grinder not starting.	<ol style="list-style-type: none"> 1. Grinder not plugged in. 2. Cord Plug could be damaged. 3. Fuse blown or tripped circuit breaker. 4. Damaged Switch. 5. Damaged Motor. 6. Motor cord damaged. 7. Power Cord voltage drop. 8. Damaged capacitor. 9. Wheels obstructed and cannot rotate. 10. Switch in OFF position. 	<ol style="list-style-type: none"> 1. Confirm that machine is plugged in properly. 2. Replace the Plug on Power Cord. 3. Replace blown fuse or reset circuit breaker. 4. Replace the Switch. 5. Contact Delta Customer Service. 6. Replace Power Cord. 7. Check proper extension cord and voltage output. 8. Replace the Capacitor. 9. Unplug Grinder and manually rotate wheel to free obstruction. 10. Make sure Grinder is in the ON position.
Motor not operating properly or at full power.	<ol style="list-style-type: none"> 1. Voltage drop to machine. 2. Damaged motor or capacitor. 3. Motor Overheating. 	<ol style="list-style-type: none"> 1. Check Power Cord and/or Extension Cord. 2. Replace Motor/Capacitor or contact Delta Customer Service. 3. Motor is overloaded. Check supplied power. Reduce force applied to grinding wheel.
Machine experiencing too much vibration.	<ol style="list-style-type: none"> 1. Machine mounted improperly. 2. Grinding Wheel imbalance. 	<ol style="list-style-type: none"> 1. Ensure the Grinder is firmly mounted to the stand or benchtop. 2. Make sure the wheels are not experiencing uneven wear. Replace wheel if needed. If issue persists, contact Delta Customer Service.
Workpiece surface not smooth.	<ol style="list-style-type: none"> 1. Machine experiencing excessive vibration. 2. Wheel has uneven wear. 3. Workpiece not held securely. 	<ol style="list-style-type: none"> 1. See Solution above. 2. Replace Grinder wheel. 3. Hold steady consistent pressure on workpiece to grinding wheel.
Machine running loud.	<ol style="list-style-type: none"> 1. Machine needs lubrication. 	<ol style="list-style-type: none"> 1. Apply lubrication to the gears and rotational pieces.

ACCESSORIES

For accessories please visit our Web Site for an online catalog or for the name or your nearest supplier.

WARNING

Since accessories other than those offered by DELTA® have not been tested with this product, use of such accessories could be hazardous. For safest operation, only DELTA® recommended accessories should be used with this product.

PARTS, SERVICE OR WARRANTY ASSISTANCE

All DELTA® Machines and accessories are manufactured to high quality standards and are serviced by a network of an Authorized Service Centers. To obtain additional information regarding your product or to obtain parts, service, warranty assistance, or the location of the nearest service center, please call 1-800-223-7278 or email customercare@dpec-na.com.

Five Year Limited Warranty

1. **WHAT IS COVERED.** Delta Power Equipment Corporation ("Company") will, at its option, repair or replace this product, if purchased at retail in the United States or Canada and the product, with normal use, has proven to be defective in workmanship or material, subject to the conditions stated in this Limited Warranty. This Limited Warranty covers only materials and labor. All transportation costs are Customer's responsibility.
2. **WARRANTY PERIOD.** All warranty claims must be submitted within five years from the date of retail purchase. For all service parts and factory refurbished products, the warranty period is 180 days.
3. **HOW TO OBTAIN SERVICE.** To obtain warranty service, you must return the defective product, at your expense, to a service center authorized by Company to perform warranty service (a "Company Authorized Service Center") within the applicable warranty period, together with acceptable proof of purchase, such as your original receipt bearing the date of purchase, or product registration number. Company reserves the right to restrict warranty claim service to the country where the purchase was made and/or to charge for the cost to export service parts or provide warranty service in a different country. For this purpose, on-line purchases are deemed made in the United States. For the location of your nearest Company Authorized Service Center, call Company's Customer Care Center at (800) 223-7278.
4. **EXCLUSIONS.**
 - Company does not offer any warranty on products purchased in used or damaged condition.
 - Company does not warrant any products purchased outside the United States or Canada.
 - Company will not be responsible for any damage that has resulted from normal wear, misuse, abuse or any repair or alteration made by anyone other than a Company Authorized Service Center or a designated representative of Company's Customer Care Center.

All IMPLIED WARRANTIES are expressly limited to the warranty period identified above.

Company will not be liable for INCIDENTAL OR CONSEQUENTIAL damages.

This limited warranty is Company's sole warranty and sets forth the customer's exclusive remedy with respect to defective products; all other warranties, express or implied, whether of merchantability, fitness for purpose, or otherwise, are expressly disclaimed by Company, except as expressly stated in this warranty statement.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or the limitation of implied warranties, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may have other rights which vary in certain states or provinces. For further details of warranty

coverage and warranty repair information, call (800) 223-7278. Thank you for purchasing our product! Please maintain a copy of your proof of purchase/receipt for any potential warranty claims.

LATIN AMERICA: This warranty does not apply to products sold in Latin America. For products sold in Latin America, call the local company or see website for warranty information.

REPLACEMENT PARTS

This power tool is provided with Type Y attachment power supply cord. If the replacement of the power supply cord is necessary, this has to be done by the manufacturer or his agent in order to avoid a safety hazard. Use only identical replacement parts. For a parts list or to order parts, visit our website at www.DeltaMachinery.com/support. You can also order parts from your nearest Authorized Warranty Service Center or by calling Technical Service Manager at 1-800-223-7278 to receive personalized support from one of our highly-trained representatives.

FREE WARNING LABEL REPLACEMENT

If your warning labels become illegible or are missing, call 1-800-223-7278 or email customercare@dpec-na.com for a free replacement.

SERVICE AND REPAIRS

All quality tools will eventually require servicing and/or replacement of parts. For information about Delta Power Equipment Corporation, its' factory-owned branches, or to locate an Authorized Warranty Service Center, visit our website at www.DeltaMachinery.com/support or call Customer Care at 1-800-223-7278. All repairs made by our service centers are fully guaranteed against defective material and workmanship. We cannot guarantee repairs made or attempted by others. By calling this number you can also find answers to most frequently asked questions.

You can also write to us for information at Delta Power Equipment Corporation, 2651 New Cut Road, Spartanburg, SC 29303 Attention: Technical Service Manager. Be sure to indicate all of the information shown on the nameplate of your saw (model number, type, serial number, date code, etc.).

2651 New Cut Road Spartanburg, SC 29303

(800) 223-7278

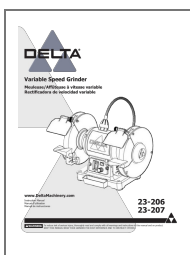
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08/17/2023

Documents / Resources







[DELTA 23-206 Variable Speed Grinder \[pdf\]](#) User Manual

23-206 Variable Speed Grinder, 23-206, Variable Speed Grinder, Speed Grinder, Grinder

References

- dpec-na.com

-  [Commercial Distributor & Supply Company | North American](#)
-  [Delta Machinery](#)
-  [Delta Machinery](#)
-  [Resource for Power Tool Information and Safety Education](#)
- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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