Northern INDUSTRIAL™ TOOLS

10"
BENCH GRINDER

OWNER'S MANUAL

⚠ WARNING:

Read carefully and understand all INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item # 15258

Thank you very much for choosing a NORTHERN TOOL + EQUIPMENT CO., INC. Product! For future reference, please complete the owner's record below:

Model: _____ Purchase Date: _____

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it.

This machine is designed for certain applications only. Northern Tool + Equipment cannot be responsible for issues arising from modification. We strongly recommend this machine is not modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the machine until you have first contacted Northern Tool + Equipment to determine if it can or should be performed on the product.

For technical questions please call 1-800-222-5381.

INTENDED USE

This 10" bench grinder is designed for general metal grinding and sharpening.

TECHNICAL SPECIFICATIONS

Description	Specifications
Voltage/Frequeney:	120V / 60Hz
Power:	4/5 HP
Rated running speed:	3450 RPM
Wheel Size:	10" x 1" x 3/4"

GENERAL SAFETY RULES

⚠ **WARNING! Read and understand all instructions.** Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

⚠ **WARNING! The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.**

SAVE THESE INSTRUCTIONS

WORK AREA

- **Keep work area clean,** free of clutter and well lit. Cluttered and dark work areas can cause accidents.
- **Do not use your tool where there is a risk of causing a fire or an explosion;** e.g. in the presence of flammable liquids, gasses, or dust. Power tools create sparks, which may ignite the dust or fumes.

- **Keep children and bystanders** away while operating a power tool. Distractions can cause you to lose control, so visitors should remain at a safe distance from the work area.
- **Be aware of all power lines, electrical circuits,** water pipes and other mechanical hazards in your work area, particularly those hazards below the work surface hidden from the operator's view that may be unintentionally contacted and may cause personal harm or property damage.
- **Be alert of your surroundings.** Using power tools in confined work areas may put you dangerously close to cutting tools and rotating parts.

ELECTRICAL SAFETY

⚠ **WARNING!** Always check to ensure the power supply corresponds to the voltage on the rating plate.

- **Do not abuse the cord.** Never carry a portable tool by its power cord, or yank tool or extension cords from the receptacle. Keep power and extension cords away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords may cause a fire and increase the risk of electric shock.
- **Grounded tools** must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adapter plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.
- **Double insulated tools** are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still doesn't fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way.
- **Avoid body contact** with grounded surfaces such as pipes, radiators, ranges, and refrigerators. There is an increase risk of electric shock if your body is grounded.
- **When operating a power tool 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.
- **Extension Cord Use:**
  A. Use only 'Listed' extension cords. If used outdoors, they must be marked “For Outdoor Use.” Those cords having 3-prong grounding type plugs and mating receptacles are to be used with grounded tools.
  B. Replace damaged or worn cords immediately.
  C. Check the name plate rating of your tool. Use of improper size or gauge of extension cord may cause unsafe or inefficient operation of your tool. Be sure your extension cord is rated to allow sufficient current flow to the motor. For the proper wire gauge for your tool, see chart.

CHART FOR MINIMUM WIRE SIZE OF EXTENSION CORD:

Nameplate AMPS	CORD LENGTH			
	25'	50'	100'	150'
0-6	18 AWG	16 AWG	16 AWG	14 AWG
6-10	18 AWG	16 AWG	14 AWG	12 AWG
10-12	16 AWG	16 AWG	14 AWG	12 AWG
12-16	14 AWG	12 AWG	(NOT RECOMMENDED)	

If in doubt, use larger cord. Be sure to check voltage requirements of the tool to your incoming power source.

- **Do not expose** power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- **Do not let your fingers** touch the terminals of plug when installing to or removing from the outlet.
- **Ground fault circuit interrupters.** If work area is not equipped with a permanently installed Ground Fault Circuit Interrupter outlet (GFCI), use a plug-in GFCI between power tool or extension cord and power receptacle.

PERSONAL SAFETY

- **Stay alert,** watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
- **Dress properly.** Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts. Air vents often cover moving parts and should be avoided.
- **Use safety apparel and equipment.** Use safety goggles or safety glasses with side shields which comply with current national standards, or when needed, a face shield. Use as dust mask in dusty work conditions. This applies to all persons in the work area. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate.
- **Avoid accidental starting.** Do not carry the power tool with your finger on the switch. Ensure the switch is in the off position before plugging tool into power outlet. In the event of a power failure, while a tool is being used, turn the switch off to prevent surprise starting when power is restored.
- **Do not overreach.** Keep proper footing and balance at all times.
- **Remove adjusting keys or wrenches** before connecting to the power supply or turning on the tool. A wrench or key that is left attached to a rotating part of the tool may result in personal injury.

TOOL USE AND CARE

- **Do not force the tool.** Tools do a better and safer job when used in the manner for which they are designed. Plan your work, and use the correct tool for the job.
- **Never use a tool** with a malfunctioning switch. Any power tool that cannot be controlled with the switch is dangerous and must be repaired by an authorized service representative before using.
- **Disconnect power** from tool and place the switch in the locked or off position before servicing, adjusting, installing accessories or attachments, or storing. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- **Secure work** with clamps or a vise instead of your hand to hold work when practical. This safety precaution allows for proper tool operation using both hands.
- **Store idle tools.** When tools are not is use, store them in a dry, secure place out of the reach of children. Inspect tools for good working condition prior to storage and before re-use.

- **Use only accessories that are recommended** by the manufacturer for your model. Accessories that may be suitable for one tool may create a risk of injury when used on another tool.
- **Keep guards in place** and in working order**.**
- **Never leave tool** running unattended.

UNPACKING

When unpacking the Bench Grinder, please check if any parts are missing or broken, please call Northern Tool + Equipment.

Description	Qty
Bench Grinder Unit	1
Eye Shield	2
Adjustable tool rest	2
Instruction manual	1

ASSEMBLY

The 10” Bench Grinder requires minor assembly. The assembly instructions below are written for the right side but the left side is identical.

Tool Rest Assembly

Step 1: Take right tool rest out from spare parts bag.

Step 2: Fix right tool rest (#26) on right inner cover.

Step 3: Pivot the tool rest down and forward so that it is in a horizontal position. Fix right tool rest by following order: washer, spring washer, bolt(#34), as shown in Figure 1.

Step 4: Adjust the tool rest (#26) to the desired distance from the grinder wheel. In no circumstances should the tool rest be closer than 1/8"from the grinder wheel.

Step 5: Tighten the two bolts on right tool rest.

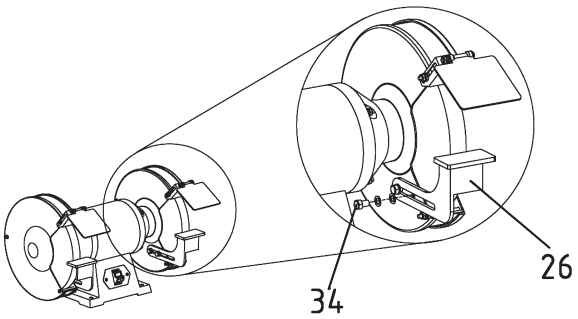


Figure 1

Eye Shield Assembly

Step 1: Attach the eye shield assembly to the shield supports(#38) using bolts(#39), eye shields(#37), spring washer(#22), washer(#23), nut(#24), as shown in Figure 2.

Step 2: Remove the bolt(#33), spring washer(#22), washer(#23), nut(#24) from the wheel cover.

Step 3: Align the EYE SHIELD Assembly with holes and replace the WHEEL COVER BOLT and NUT.

Step 4: Adjust the EYE SHIELD to the desired position and tighten the WHEEL COVER NUT.

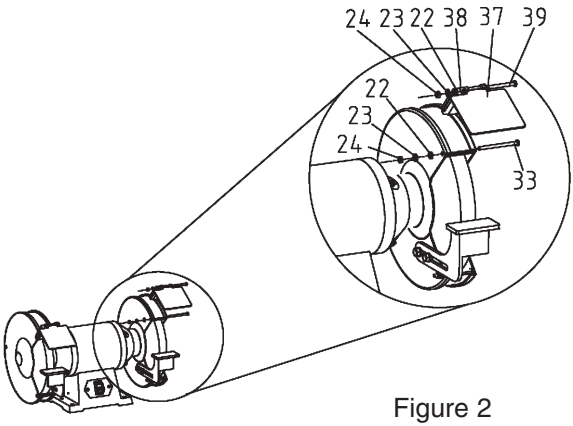


Figure 2

Remove Grinding Wheel

Step 1: Remove left grinding wheel cover(#23) by unscrewing bolt(#33), and nut(#24).

Step 2: Place adjustable wrenches on both WHEEL MOUNTING NUTS(#40/31).

Step 3: To remove the right hand GRINDING WHEEL (#29) turn its WHEEL MOUNTING NUT clockwise while keeping the left hand WHEEL MOUNTING NUT stationary. To remove the left hand GRINDING WHEEL turn its WHEEL MOUNTING NUT counter-clockwise while keeping the right hand WHEEL MOUNTING NUT stationary.

Step 4: Slide the WHEEL MOUNTING WASHER (#27) off of the SPINDLE (#4).

Step 5: Slide the GRINDING WHEEL off of the SPINDLE (#4).

Installing Grinding Wheel

Step 1: Make sure the inside wheel mounting washer(#27) is on the spindle(#4) with its concave side facing out as shown in Figure 3.

Step 2: Place the GRINDING WHEEL (#21) on the SPINDLE.

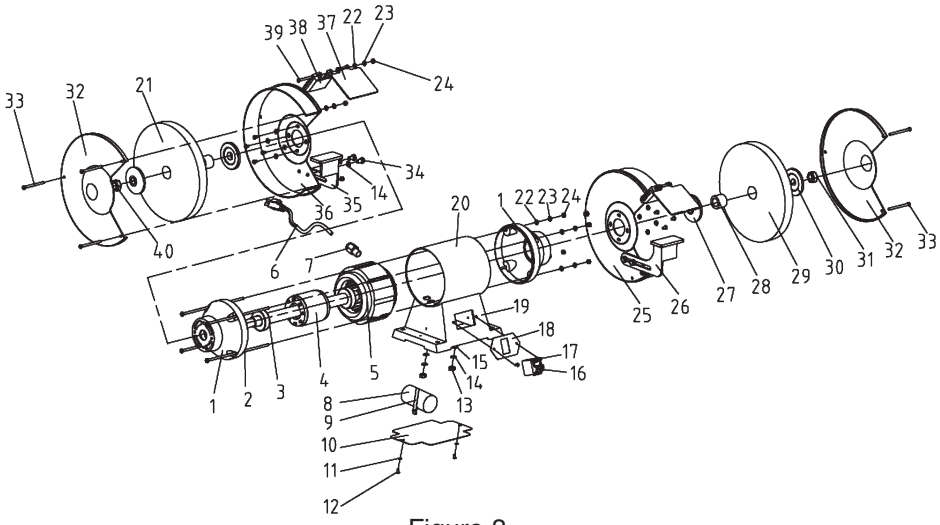


Figure 3

Step 3: Place the outside WHEEL MOUNTING WASHER (#30) on the SPINDLE with its concave side facing in.

Step 4: Place the WHEEL MOUNTING NUT (#31) on the SPINDLE and tighten.

⚠ **Caution**: Do not over tighten the WHEEL MOUNTING NUT as it may crack the GRINDING WHEEL.

Step 5: Replace both WHEEL COVERS (#32) and secure with their BOLTS (#33), NUTS (#24).

OPERATION

⚠ **Caution**: The grinding wheels must always be checked for cracks of imperfections. This is done with the “ring test”. Tap the wheel gently near the outer rim with the handle of a screwdriver; you should hear a clear bell-like ringing. If a dull thud occurs do not use the wheel! This means the wheel has been damaged and will, most likely, come apart during normal operations.

Operation Notes

The workpiece will quickly become heated. Frequently quench the workpiece in water during the grinding process. If the metal becomes heated so much that it gets blue-colored, it will be too soft to be useful. You must grind off the part that is colored, cool the workpiece and start again.

General operation

Step 1: Obtain a tray that is large enough for the workpiece to fit into, fill it with water and place it near the Bench Grinder.

Step 2: Turn the Bench Grinder on.

Step 3: Once the GRINDING WHEEL has reached full speed, bring the workpiece up to the wheel gently and without jarring.

Step 4: Use the TOOL REST (#26/35) to steady the workpiece.

Step 5: The workpiece will become quickly heated. Frequently quench it in water.

MAINTENANCE

⚠ **WARNING:** Make sure this tool is disconnected from its power source before attempting any maintenance, cleaning, or inspection.

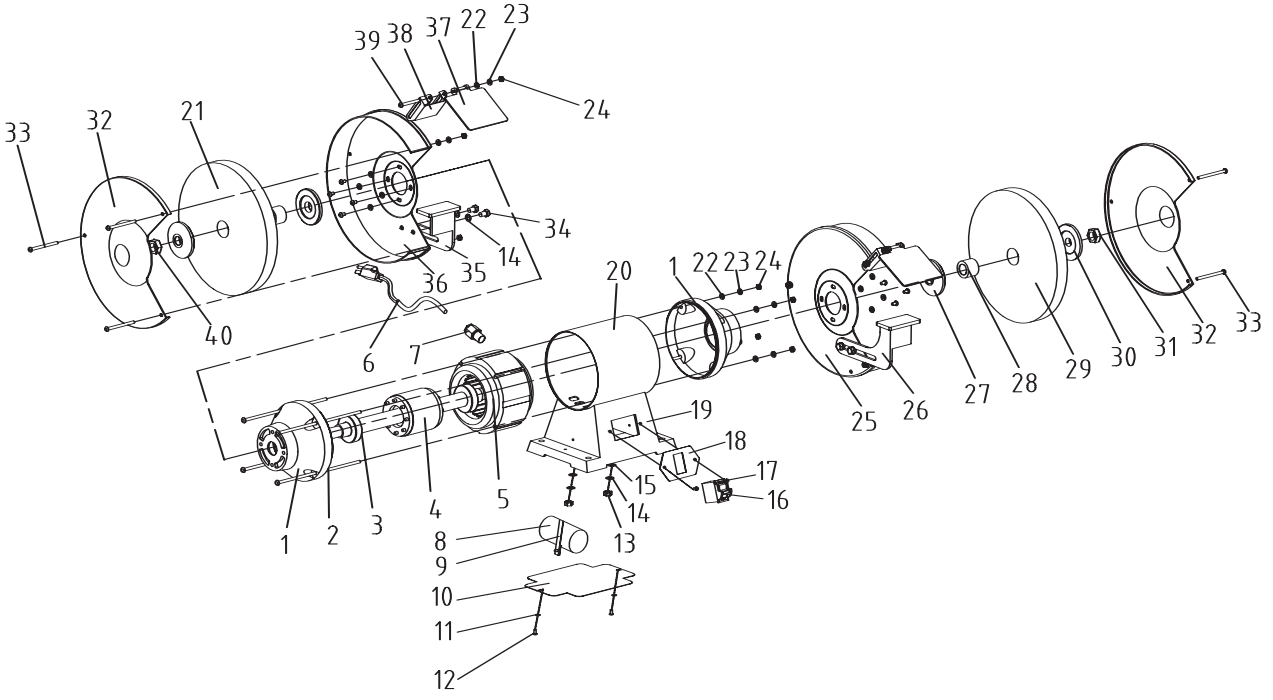
- **Maintain your tools.** It is recommended that the general condition of any tool be examined before it is used. Keep your tools in good repair by adopting a program of conscientious repair and maintenance in accordance with the recommended procedures found in this manual. If any abnormal vibrations or noise occurs, turn the tool off immediately and have the problem corrected before further use. Have necessary repairs made by qualified service personnel.
- **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control. Keep handles dry, clean, and free from oil and grease.
- **Cleaning.** Use only soap and a damp cloth to clean your tools. Many household cleaners are harmful to plastics and other insulation. Never let liquid get inside a tool.

WARRANTY

One Year Warranty
For warranty questions, call 1-800-222-5381

DIAGRAM & PARTS LIST

No.	Description	No.	Description
1	End Closure	21	Grinding Wheel
2	Screw M5X200	22	Washer
3	Bearing	23	Spring Washer
4	Rotor Assembly	24	Nut M5
5	Stator Assembly	25	Right inner Guard
6	Cable	26	Right Tool Rest
7	Strain Relief	27	Grinding Wheel Washer
8	Capacitor	28	Gringding Wheel Sheath
9	Capacitor Clip	29	Grinding Wheel
10	Base Plate	30	Grinding Wheel Washer
11	Washer	31	Nut
12	Screw M4X12	32	Outer Guard
13	Nut M8	33	Screw M5X65
14	Spring Washer	34	Bolt M8X12
15	Washer	35	Left Tool Rest
16	Switch	36	Left inner Guard
17	Screw M4X10	37	Eye Shield
18	Switch panel	38	Lens Bracket
19	Base	39	Screw M5X45
20	Housing	40	Left Screw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⚠ WARNING!

Some dust created by power sanding, sawing, grinding, and other construction activities contains chemicals known to cause cancer, birth defects, or other reproductive harm. Some examples of these chemicals are:

- Lead, from lead-based paints
- Crystalline silica, from bricks, cement, and other masonry products
- 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 use approved personal protective equipment, such as dust masks that are specially designed to filter out microscopic particles.

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