

CHICAGO

Electric® Power Tools

7" ELECTRONIC POLISHER

Model 66615

SET UP AND OPERATING INSTRUCTIONS



Visit our website at: <http://www.harborfreight.com>



**Read this material before using this product.
Failure to do so can result in serious injury.
SAVE THIS MANUAL.**

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For technical questions or replacement parts, please call 1-800-444-3353.

Manual Revised 10b

SAVE THIS MANUAL

Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

IMPORTANT SAFETY INFORMATION

In this manual, on the labeling, and all other information provided with this product:



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

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

CAUTION

CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to personal injury.

CAUTION

CAUTION, without the safety alert symbol, is used to address practices not related to personal injury.

General Power Tool Safety Warnings



WARNING Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

1. **Work area safety**
 - a. **Keep work area clean and well lit.**
Cluttered or dark areas invite accidents.
 - b. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** *Power tools create sparks which may ignite the dust or fumes.*
 - c. **Keep children and bystanders away while operating a power tool.**
Distractions can cause you to lose control.
2. **Electrical safety**
 - a. **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with grounded power tools.**
Unmodified plugs and matching outlets will reduce risk of electric shock.
 - b. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** *There is an*

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increased risk of electric shock if your body is grounded.

- c. **Do not expose power tools to rain or wet conditions.** *Water entering a power tool will increase the risk of electric shock.*
 - d. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled cords increase the risk of electric shock.*
 - e. **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** *Use of a cord suitable for outdoor use reduces the risk of electric shock.*
 - f. **If operating a power tool in a damp location is unavoidable, use a Ground Fault Circuit Interrupter (GFCI) protected supply.** *Use of a GFCI reduces the risk of electric shock.*
3. **Personal safety**
- a. **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.*
 - b. **Use safety equipment. Always wear eye protection.** *Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.*
 - c. **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** *Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.*
4. **Power tool use and care**
- a. **Do not force the power tool. Use the correct power tool for your application.** *The correct power tool will do the job better and safer at the rate for which it was designed.*
 - b. **Do not use the power tool if the switch does not turn it on and off.** *Any power tool that cannot be controlled with the switch is dangerous and must be repaired.*
 - c. **Disconnect the plug from the power source and/or the battery pack from**
- d. **Remove any adjusting key or wrench before turning the power tool on.** *A wrench or a key left attached to a rotating part of the power tool may result in personal injury.*
 - e. **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.*
 - f. **Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.** *Loose clothes, jewelry or long hair can be caught in moving parts.*
 - g. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** *Use of these devices can reduce dust-related hazards.*
 - h. **Only use safety equipment that has been approved by an appropriate standards agency.** *Unapproved safety equipment may not provide adequate protection. Eye protection must be ANSI-approved and breathing protection must be NIOSH-approved for the specific hazards in the work area.*

the power tool before making any adjustments, changing accessories, or storing power tools. *Such preventive safety measures reduce the risk of starting the power tool accidentally.*

- d. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** *Power tools are dangerous in the hands of untrained users.*
- e. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** *Many accidents are caused by poorly maintained power tools.*
- f. **Keep cutting tools sharp and clean.** *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*
- g. **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** *Use of the power tool for operations different from those intended could result in a hazardous situation.*

5. Service

- a. **Have your power tool serviced by a qualified repair person using only identical replacement parts.** *This will ensure that the safety of the power tool is maintained.*

Safety Warnings Common for Sanding or Polishing Operations

- 1. **This power tool is intended to function as a sander or polisher. Read all safety warnings, instructions,**

illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

- 2. **Operations such as grinding, wire brushing, or cutting-off are not recommended to be performed with this power tool.** Operations for which the power tool was not designed may create a hazard and cause personal injury.
- 3. **Do not use accessories which are not specifically designed and recommended by the tool manufacturer.** Just because the accessory can be attached to your power tool, it does not assure safe operation.
- 4. **The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool.** Accessories running faster than their RATED SPEED can break and fly apart.
- 5. **The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool.** Incorrectly sized accessories cannot be adequately guarded or controlled.
- 6. **The arbor size of wheels, flanges, backing pads or any other accessory must properly fit the spindle of the power tool.** Accessories with arbor holes that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
- 7. **Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, backing pad**

for cracks, tear or excess wear, wire brush for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute. Damaged accessories will normally break apart during this test time.

8. **Wear personal protective equipment.** Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or work piece fragments. The eye protection must be capable of stopping flying debris generated by various operations. The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtering out particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
9. **Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment.** Fragments of work piece or of a broken accessory may fly away and cause injury beyond immediate area of operation.
10. **Hold power tool by insulated gripping surfaces only, when performing an operation where the accessory may contact hidden wiring or its own cord.** An accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and shock the operator.
11. **Position the cord clear of the spinning accessory.** If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning accessory.
12. **Never lay the power tool down until the accessory has come to a complete stop.** *The spinning accessory may grab the surface and pull the power tool out of your control.*
13. **Do not run the power tool while carrying it at your side.** *Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.*
14. **Regularly clean the power tool's air vents.** *The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.*
15. **Do not operate the power tool near flammable materials.** *Sparks could ignite these materials.*
16. **Do not use accessories that require liquid coolants.** *Using water or other liquid coolants may result in electrocution or shock.*
17. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
18. Avoid unintentional starting. Prepare to begin work before turning on the tool.
19. Do not depress the spindle lock when starting or during operation.
20. Do not leave the tool unattended when it is plugged into an electrical outlet. Turn off the tool, and unplug it from its electrical outlet before leaving.

21. Use clamps (not included) or other practical ways to secure and support the workpiece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control and personal injury.
22. This product is not a toy. Keep it out of reach of children.
23. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. In addition, people with pacemakers should:
- Avoid operating alone.
 - Do not use with power switch locked on.
 - Properly maintain and inspect to avoid electrical shock.
 - Any power cord must be properly grounded. Ground Fault Circuit Interrupter (GFCI) should also be implemented – it prevents sustained electrical shock.
24. **WARNING:** Some dust created by power sanding, sawing, grinding, drilling, and other construction activities, contains chemicals known [to the State of California] to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
- Lead from lead-based paints
 - Crystalline silica from bricks and cement or 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 work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles. (California Health & Safety Code § 25249.5, *et seq.*)
25. **WARNING:** Handling the cord on this product will expose you to lead, a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling. (California Health & Safety Code § 25249.5, *et seq.*)
26. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may 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.

Kickback and Related Warnings

Kickback is a sudden reaction to a pinched or snagged rotating wheel, backing pad, brush or any other accessory. Pinching or snagging causes rapid stalling of the rotating accessory which in turn causes the uncontrolled power tool to be forced in the direction opposite of the accessory's rotation at the point of the binding.

For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump toward or away from the operator, depending on direction of the wheel's movement at the point of pinching. Abrasive wheels may also break under these conditions.

Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.

1. **Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up.** *The operator can control torque reactions or kickback forces, if proper precautions are taken.*
2. **Never place your hand near the rotating accessory.** *Accessory may kickback over your hand.*
3. **Do not position your body in the area where power tool will move if kickback occurs.** *Kickback will propel the tool in direction opposite to the wheel's movement at the point of snagging.*
4. **Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory.** *Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.*
5. **Do not attach a saw chain woodcarving blade or toothed saw blade.** *Such blades create frequent kickback and loss of control.*

Safety Warnings Specific for Sanding Operations

1. **Do not use excessively oversized sanding disc paper. Follow manufacturer's recommendations when selecting sanding paper.** *Larger sanding paper extending beyond the sanding pad presents a laceration hazard and may cause snagging, tearing of the disc or kickback.*

Safety Warnings Specific for Polishing Operations

1. **Do not allow any loose portion of the polishing bonnet or its attachment strings to spin freely. Tuck away or trim any loose attachment strings.** *Loose and spinning attachment strings can entangle your fingers or snag on the workpiece.*
2. If waxing and polishing, make sure the object being polished is free from burrs and other foreign matter which could damage the Bonnets (52, 53).

Vibration Safety

This tool vibrates during use. Repeated or long-term exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders. To reduce the risk of vibration-related injury:

1. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular medical check-ups to ensure medical problems are not being caused or worsened from use. Pregnant women or people who have impaired blood circulation to the hand, past hand injuries, nervous system disorders, diabetes, or Raynaud's Disease should not use this tool. If you feel any medical or physical symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.
2. Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers, increasing the risk of vibration-related injury.
3. Wear suitable gloves to reduce the vibration effects on the user.

4. Use tools with the lowest vibration when there is a choice between different processes.
5. Include vibration-free periods each day of work.
6. Grip tool as lightly as possible (while still keeping safe control of it). Let the tool do the work.
7. To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.



SAVE THESE INSTRUCTIONS.

GROUNDING



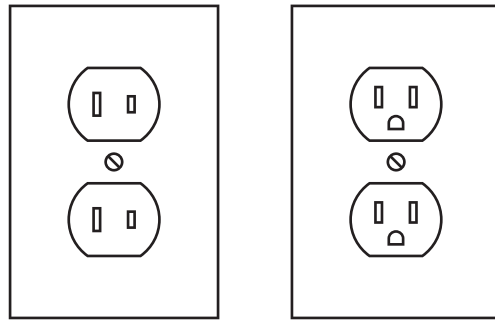
TO PREVENT ELECTRIC SHOCK

AND DEATH FROM INCORRECT GROUNDING WIRE CONNECTION:



Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the power cord or plug is damaged. If damaged, have it repaired by a service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

Double Insulated Tools: Tools with Two Prong Plugs



Outlets for 2-Prong Plug






1. Tools marked "Double Insulated" do not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association, and the National Electrical Code.
2. Double insulated tools may be used in either of the 120 volt outlets shown in the preceding illustration. (See **Outlets for 2-Prong Plug.**)

Extension Cords

1. **Grounded** tools require a three wire extension cord. **Double Insulated** tools can use either a two or three wire extension cord.
2. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage. (See **Table A.**)
3. The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14 gauge cord can carry a higher current than a 16 gauge cord. (See **Table A.**)

4. When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required.
(See Table A.)
5. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size.
(See Table A.)
6. If you are using an extension cord outdoors, make sure it is marked with the suffix "W-A" ("W" in Canada) to indicate it is acceptable for outdoor use.
7. Make sure the extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
8. Protect the extension cords from sharp objects, excessive heat, and damp or wet areas.

Symbology

	Double Insulated
	Canadian Standards Association
	Underwriters Laboratories, Inc.
	Volts Alternating Current
	Amperes
n ₀ xxxx/min.	No Load Revolutions per Minute (RPM)

RECOMMENDED MINIMUM WIRE GAUGE FOR EXTENSION CORDS* (120/240 VOLT)					
NAMEPLATE AMPERES (at full load)	EXTENSION CORD LENGTH				
	25'	50'	75'	100'	150'
0 – 2.0	18	18	18	18	16
2.1 – 3.4	18	18	18	16	14
3.5 – 5.0	18	18	16	14	12
5.1 – 7.0	18	16	14	12	12
7.1 – 12.0	18	14	12	10	-
12.1 – 16.0	14	12	10	-	-
16.1 – 20.0	12	10	-	-	-

TABLE A * Based on limiting the line voltage drop to five volts at 150% of the rated amperes.

SPECIFICATIONS

Electrical Specifications	120 V~ / 60 Hz / 10 A
No load speed	1000~3500 RPM
Maximum Accessory Size	7" Diameter
Mounting Disc Type	7" Hook & Loop
Variable Speed Switch	Sliding Button (+ & -)
Display Unit of Measure	RPM x 100
Accessories	Polishing Bonnet Foam Bonnet Sanding Disc - 80 Grit

UNPACKING

When unpacking, make sure that the item is intact and undamaged. If any parts are missing or broken, please call Harbor Freight Tools at 1-800-444-3353 as soon as possible.

INSTRUCTIONS FOR PUTTING INTO USE



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

⚠️ WARNING

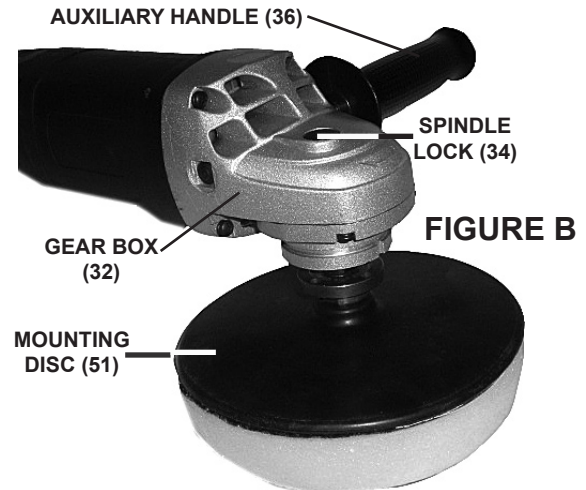
TO PREVENT SERIOUS INJURY

FROM ACCIDENTAL OPERATION:

Turn the Power Switch (11) off and unplug the Polisher from its electrical outlet before assembling or making any adjustments to the tool.

Note: For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

ASSEMBLY



1. To attach the Mounting Disc (51) to the Polisher, press and hold the Spindle Lock (34). Screw the Mounting Disc onto the Spindle (50) of the tool. Then release pressure on the Spindle Lock.
2. To attach the Auxiliary Handle (36), screw the Handle firmly into the threaded mounting hole located on either side of the Gear Box (32).

OPERATING INSTRUCTIONS



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

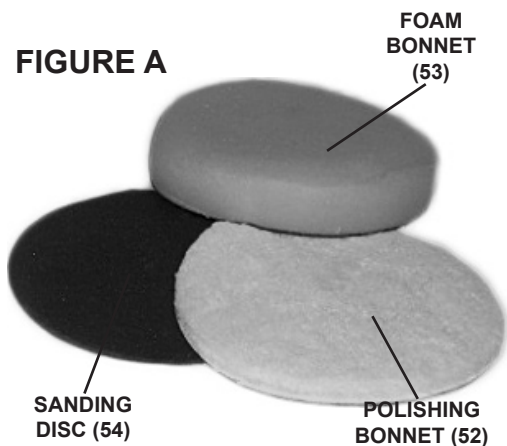
Tool Set Up

⚠️ WARNING TO PREVENT SERIOUS INJURY

FROM ACCIDENTAL OPERATION:

Turn the Power Switch (11) off and unplug the Polisher from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.

To Attach The Polishing Bonnet, Foam Bonnet, And Sanding Disc:



1. The face of the Mounting Disc (51) and backs of the Polishing Bonnet (52), Foam Bonnet (53), and Sanding Disc (54) have a “hook-and-loop” design. **(See Figures A and B.)**
2. To attach the Polishing Bonnet , Foam Bonnet, or Sanding Disc to the Mounting Disc simply press the accessory firmly

onto the Mounting Disc.
(See Figures A and B.)

3. Make sure the accessory is placed evenly on the Mounting Disc and is secure before turning on the tool.

Work Piece and Work Area Set Up

1. Designate a work area that is clean and well-lit. The work area must not allow access by children or pets to prevent injury and distraction.
2. Route the Power Cord (5) along a safe route to reach the work area without creating a tripping hazard or exposing the Power Cord to possible damage. The Power Cord must reach the work area with enough extra length to allow free movement while working.
3. Secure loose work pieces using a vise or clamps (not included) to prevent movement while working.
4. There must not be hazardous objects, such as utility lines or foreign objects, nearby that will present a hazard while working.
5. Make sure to read and understand all instructions and safety precautions as outlined in the manufacturer’s manual for the object you will polish or sand.
6. If waxing and polishing, make sure the object being waxed and polished is free from burrs and any other foreign matter which could damage the Bonnets (52, 53).

General Operating Instructions

To Wax An Object:

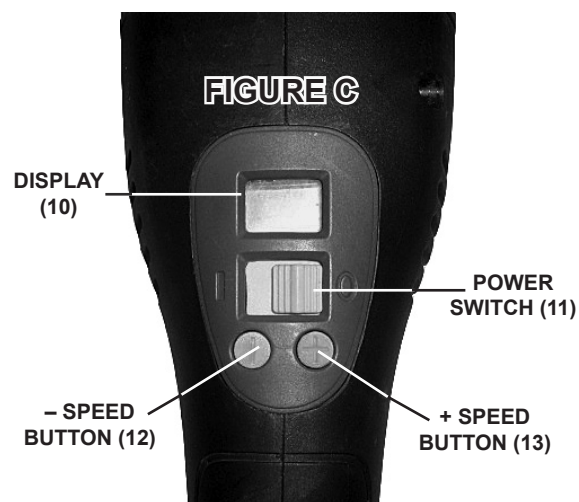
1. Attach the Foam Bonnet (53) to the Mounting Disc (51) as previously discussed in this manual.

NOTE: Prior to waxing an object, make sure the surface has been thoroughly cleaned and is free of dust, dirt, oil, grease, etc.

2. Apply about two tablespoons of polishing liquid or wax (not included) evenly on the Foam Bonnet (53). Do not apply the polishing liquid or wax directly to the object's surface. The amount of polishing liquid or wax needed will vary according to the object's size. Avoid using too much polishing liquid or wax. The Foam Bonnet will not absorb as much polishing liquid or wax in subsequent applications.
3. Plug the Power Cord (5) into the nearest 120 volt, grounded, electrical outlet.
4. In order to keep the Power Cord (5) out of the way, hang it over your shoulder.

IMPORTANT: Start and stop the Polisher only while it is held firmly against the surface of the object being waxed. Failure to do so may result in the Foam Bonnet (53) being thrown from the Mounting Disc (51).

5. Grip the Polisher firmly with both hands. Then turn the Power Switch (11) to its "ON" position. **(See Figure C.)**



6. Increase the tool's speed by pressing the + Speed Button (13). Decrease the tool's speed by pressing the - Speed Button (12). **(See Figure C.)**
7. The Display (10) will indicate the tool's speed.

NOTE: When first applying wax to the object, start the tool at its *lowest* speed to avoid throwing wax off the Foam Bonnet (53). Then increase the speed as needed.

8. Begin applying polishing liquid or wax to the object. Apply the polishing liquid or wax to all flat surfaces with broad sweeping strokes in a figure eight pattern. Apply the polishing liquid or wax evenly over the surface of the object, and add additional polishing liquid or wax as needed.
9. After the polishing liquid or wax has been applied to the object's surface, turn the Power Switch (11) to its "OFF" position. Then unplug the Power Cord (5). **(See Figure C.)**
10. Remove the Foam Bonnet (53) from the Mounting Disc (51). With the Foam Bonnet in your hand, apply the polishing liquid or wax to all hard to reach areas of the object. **(See Figures A and B.)**

11. Allow sufficient time for the polishing liquid or wax to dry on the object.

To Polish An Object:

1. Attach the Polishing Bonnet (52) to the Mounting Disc (51) as previously discussed in this manual. **(See Figures A and B.)**
2. Plug the Power Cord (5) into the nearest 120 volt, grounded, electrical outlet.
3. In order to keep the Power Cord (5) out of the way, hang it over your shoulder.

IMPORTANT: Start and stop the Polisher only while it is held firmly against the surface of the object being polished. Failure to do so may result in the Polishing Bonnet (52) being thrown from the Mounting Disc (51).

4. Grip the Polisher firmly with both hands. Then turn the Power Switch (11) to its “ON” position. **(See Figure C.)**
5. Increase the tool’s speed by pressing the + Speed Button (13). Decrease the tool’s speed by pressing the – Speed Button (13). **(See Figure C.)**
6. The Display (10) will indicate the tool’s speed.
7. Begin polishing the object by lightly buffing off the polishing liquid or wax residue in broad sweeping strokes in a figure eight pattern. Continue polishing until all the residue is removed.

IMPORTANT: Apply *minimal pressure* on the Polisher to avoid damaging the surface of the object.

8. After the polishing liquid or wax has been removed from the object’s surface, slide the Power Switch (11) to its “OFF” position. Then unplug the Power Cord (5). **(See Figure C.)**

9. Remove the Polishing Bonnet (52) from the Mounting Disc (51). With the Polishing Bonnet in your hand, remove the polishing liquid or wax from all hard to reach areas of the object. **(See Figures A and B.)**

To Sand An Object:

1. Attach the Sanding Disc (54) to the Mounting Disc (51) as previously discussed in this manual. **(See Figures A and B.)**
2. Plug the Power Cord (5) into the nearest 120 volt, grounded, electrical outlet.
3. In order to keep the Power Cord (5) out of the way, hang it over your shoulder.
4. Grip the Polisher firmly with both hands. Then turn the Power Switch (11) to its “ON” position. **(See Figure C.)**
5. Increase the tool’s speed by pressing the + Speed Button (13). Decrease the tool’s speed by pressing the – Speed Button (13). **(See Figure C.)**
6. The Display (10) will indicate the tool’s speed.
7. Once the Sanding Disc (54) is turning at the desired speed, sand the object evenly with gentle, broad, sweeping strokes in a criss-cross pattern.
8. During the sanding process, it may be necessary to occasionally stop the Polisher, disconnect it from its electrical outlet, remove the worn sandpaper and replace with new sandpaper.
9. When the sanding process is complete, turn the Power Switch (11) to its “OFF” position. Then unplug the Power Cord (5). **(See Figure C.)**

MAINTENANCE AND SERVICING



Procedures not specifically explained in this manual must be performed only by a qualified technician.

WARNING TO PREVENT SERIOUS INJURY

FROM ACCIDENTAL OPERATION:

Turn the Power Switch (11) off and unplug the Polisher from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.

TO PREVENT SERIOUS INJURY FROM TOOL FAILURE:

Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

Inspection, Maintenance, and Cleaning

1. BEFORE EACH USE, inspect the general condition of the Polisher. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, damaged electrical wiring, and any other condition that may affect its safe operation.
2. AFTER USE, clean external surfaces of the tool with clean cloth. **Do not immerse any part of the tool in liquid.** Remove the Bonnet (52, 53) from the tool when not in use. This will allow the Bonnet to dry and retain its original shape. The Bonnets may be machine-washed in cold water with detergent. Then machine-dry the Bonnets at medium heat.

3. CARBON BRUSH MAINTENANCE: **IMPORTANT: Cleaning or replacing the Carbon Brushes (19) should only be done by a qualified service technician.**
 - a. The Carbon Brushes (19) may require maintenance when the motor performance of the tool decreases or stops working completely. To maintain the Brushes:
 - b. First remove Right and Left Handles (2,9).
 - c. Remove the two Carbon Brushes (19) from the housing. Keep track of which orientation the old Carbon Brushes were in to prevent needless wear if they will be reinstalled.
 - d. If either Carbon Brush (19) is worn down by more than 1/2, replace **both** Carbon Brushes.
 - e. To clean old Carbon Brushes (19) before reusing them, rub the contact areas with a pencil eraser.
 - f. Reinsert the old Carbon Brushes (19) in the same orientation to reduce wear.
 - g. When installing the Carbon Brushes (19), make sure the carbon portions of the Carbon Brushes contact the Motor Armature, and that the Springs face away from the Motor. Also, make sure the Springs operate freely.

Note: New Carbon Brushes (19) tend to spark when first used until they wear and conform to the Motor's Armature.

4. **WARNING!** If the Power Cord (5) of this Polisher is damaged, it must be replaced only by a qualified service technician.

Troubleshooting

Problem	Possible Causes	Likely Solutions
Tool will not start.	<ol style="list-style-type: none"> 1. Cord not connected. 2. No power at outlet. 3. Internal damage or wear. (Carbon brushes or switch, for example.) 	<ol style="list-style-type: none"> 1. Check that cord is plugged in. 2. Check power at outlet. If outlet is unpowered, turn off tool and check circuit breaker. If breaker is tripped, make sure circuit is right capacity for tool and circuit has no other loads. 3. Have technician service tool.
Tool operates slowly.	<ol style="list-style-type: none"> 1. Excess pressure applied to workpiece. 2. Power being reduced by long or small diameter extension cord. 	<ol style="list-style-type: none"> 1. Decrease pressure, allow tool to do the work. 2. Eliminate use of extension cord. If an extension cord is needed, use one with the proper diameter for its length and load. See <i>Extension Cords</i> in <i>GROUNDING</i> section.
Performance decreases over time.	Carbon brushes worn or damaged.	Have qualified technician replace brushes.
Excessive noise or rattling.	Internal damage or wear. (Carbon brushes or bearings, for example.)	Have technician service tool.
Overheating.	<ol style="list-style-type: none"> 1. Forcing tool to work too fast. 2. Blocked motor housing vents. 3. Motor being strained by long or small diameter extension cord. 	<ol style="list-style-type: none"> 1. Allow tool to work at its own rate. 2. Wear ANSI-approved safety goggles and NIOSH-approved dust mask/respirator while blowing dust out of motor using compressed air. 3. Eliminate use of extension cord. If an extension cord is needed, use one with the proper diameter for its length and load. See <i>Extension Cords</i> in <i>GROUNDING</i> section.
Polishing Bonnet does not remove all of the polishing liquid or wax.	<ol style="list-style-type: none"> 1. Too much polishing liquid or wax has been applied. 2. Bonnet saturated. 	<ol style="list-style-type: none"> 1. Reduce the amount of polishing liquid or wax used. 2. Use a clean bonnet.
Tool not properly sanding.	<ol style="list-style-type: none"> 1. Sandpaper is dull. 2. Wrong grit of sandpaper used. 	<ol style="list-style-type: none"> 1. Replace sandpaper. 2. Change sandpaper to a finer or coarser grit depending on the job.



Follow all safety precautions whenever diagnosing or servicing the tool. Disconnect power supply before service.

PLEASE READ THE FOLLOWING CAREFULLY

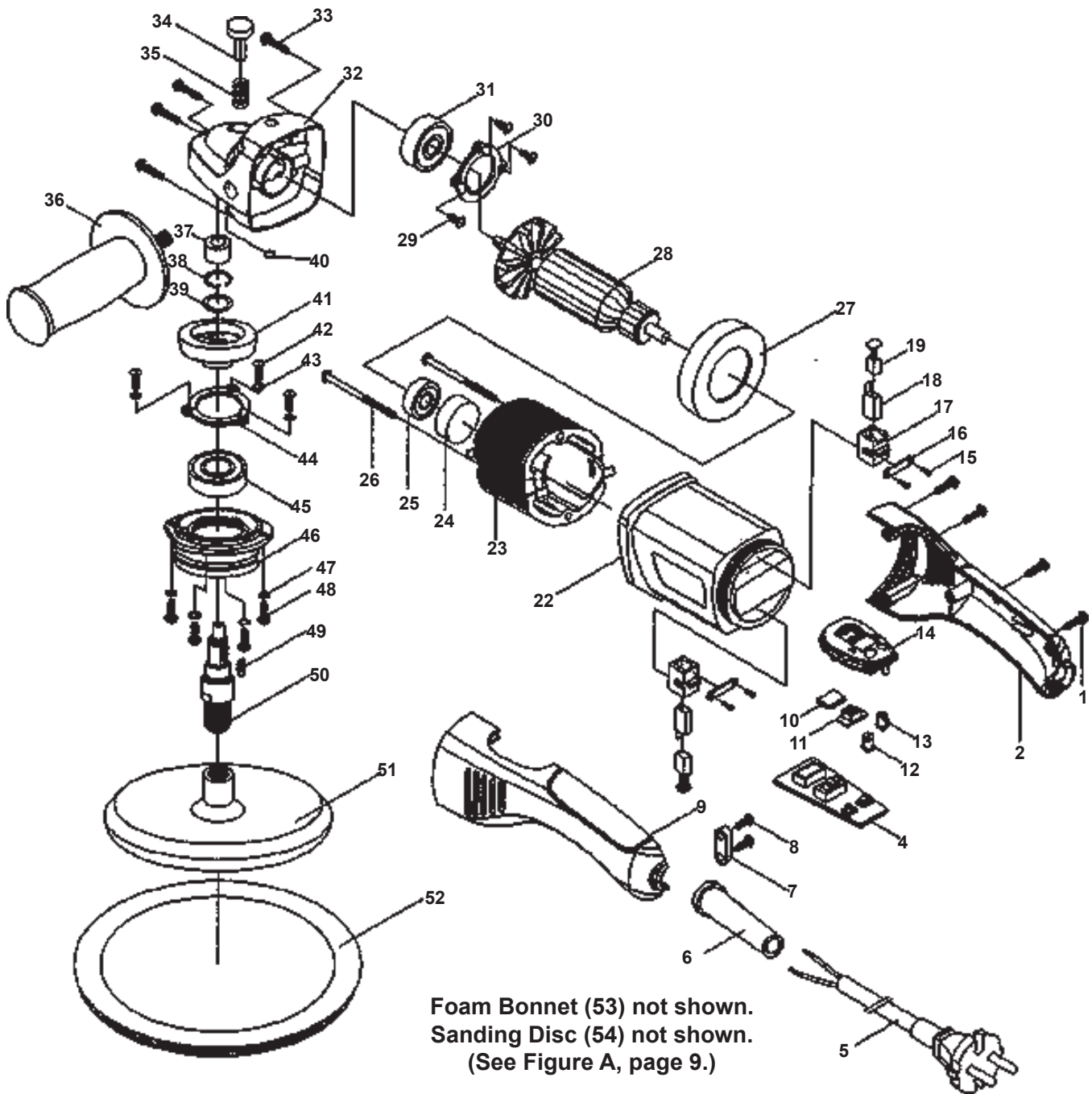
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PARTS LIST

Part	Description	Qty.
1	Screw	5
2	Right Handle	1
4	Circuit Board	1
5	Power Cord & Plug	1
6	Cord Stress Relief	1
7	Cord Retaining Bracket	1
8	Screw	2
9	Left Handle	1
10	Display	1
11	Power Switch	1
12	- Speed Button	1
13	+ Speed Button	1
14	Control Cover	1
15	Screw	4
16	Bracket	2
17	Brush Holder	2
18	Brush Sheath	2
19	Carbon Brush	2
22	Motor Housing	1
23	Stator	1
24	Bearing Holder	1
25	Rear Bearing	1
26	Screw	2
27	Bushing	1
28	Rotor	1
29	Screw	3

Part	Description	Qty.
30	Bracket	1
31	Front Bearing	1
32	Gear Box	1
33	Screw	4
34	Spindle Lock	1
35	Spring	1
36	Auxiliary Handle	1
37	Oil Seal	1
38	Retaining Ring	1
39	Washer	1
40	Retaining Ring	1
41	Large Gear	1
42	Screw	3
43	Washer	3
44	Fixed Board	1
45	Bearing	1
46	Connecting Board	1
47	Washer	4
48	Screw	4
49	Key	1
50	Spindle	1
51	Mounting Disc	1
52	Polishing Bonnet	1
53	Foam Bonnet	1
54	Sanding Disc	1

ASSEMBLY DIAGRAM



Record Product's Serial Number Here: _____

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

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