



THE SHINING LEGEND.

**CYCLO DUAL HEAD ORBITAL POLISHER
MODEL 5, 5C AND 6CE
INSTRUCTION MANUAL**



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TECHNICAL SPECIFICATIONS MODEL 5, 5C AND 6CE

	<u>Power Consumption</u>	<u>Output</u>	<u>H.P.</u>	<u>Amp</u>
Model 5:	110 – 120 V a.c.,	60 Hz,	.35h.p.	(.23kW) 2.0A
Model 5C:	220 - 240 V a.c.	50 Hz	.35h.p.	(.23kW) 1.0A
Model 6CE:	220 - 240 V a.c.	50 to 60 Hz	.35h.p.	(.23kW) 1.0A
RPM 5 & 5C:	2800 to 3200			
RPM 6CE	n = 3200/min			
Weight:	6.5 lbs (2.9 kg)			
Pad or Bonnet Capacity	2 x 100 mm diameter			
Motor:	Alternating current, Universal, Semi-Enclosed 24-bar commutator			
Electric Cord:	Model 5 and 5C- 9.5' long, Non-Marking 16 ga/3 SJTOW Model 5C 2.5 m long, 1mm ² ga CEE 7/7 Model 6CE 2.5 m long, Non-Marking, CEE 7/7			
Housing:	Heavy-duty cast aluminum			
Testing Labs:	Intertek ETL SEMKO, Sun Microsystems Advance Product Testing Laboratory Model 6CE			
* - Vibration testing and weighting per EN ISO 5349-1:2001, Vibration testing per ISO 8662-1:1986				
Vibration – (m/s²)*:	Vertical	Lateral	Front-To-Back	
Velcro Pads on Rubber Pad Holders				
Front Handle	0.00013	0.11208	0.00024	
Rear Handle	0.00415	0.81142	0.00001	
Pads on DoublePrecision Quick Connect Adapters				
Front Handle	0.00017	0.06622	0.00001	
Rear Handle	0.00067	0.59596	0.00000	

THE APPEARANCE OF YOUR CYCLO POLISHER

Each of our Cyclo Toolmakers polishers are all hand crafted with the same superior level of quality and workmanship. As all handmade items will vary slightly, we cannot guarantee that each polisher will be identical with every other one of our polishers. You may notice light sanding or buffing marks in the hand-finished aluminum castings, or you may find traces of black polishing rouge in the recesses of the body. These are all marks of an authentic Cyclo Toolmakers tool. Naturally, Cyclo Toolmakers, Inc. will replace or repair material or workmanship defects. Refer to the Cyclo Toolmakers Warranty for further information.

SAFETY INSTRUCTIONS

General Safety Rules

WARNING: Read all instructions. *Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term "power tool" in all the warnings listed below refers to your mains-operated (corded) power tool or battery –operated (cordless) power tool.*

SAVE THESE INSTRUCTIONS

1) Work Area

- a) **Keep work area clean and well lit.** *Cluttered and dark areas invite accidents.*
- b) **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gasses 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 earthed (grounded) power tools.** *Unmodified plugs and matching outlets will reduce risk of electric shock.*
- b) **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** *There is an increased risk of electric shock if your body is earthed or 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) **Guard against electrical shock.** *It is recommended to use this tool on a GFI (Ground Fault Interrupter) or RCD (Residual Current Device) protected circuit with a rated residual current of 30 mA or less.*

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) **Avoid accidental starting. Ensure the switch is in the off-position before plugging in.** *Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.*
- d) **Remove any adjusting key or wrench before turning the power tool on.** *A wrench or 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.*

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 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 and in the manner intended for the particular type of power tool, 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.*

6) Safety Warnings Common for Polishing and Scrubbing Operations.

- a) **This power tool is intended to function as a polisher only. 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.*
- b) **Operations such as sanding, 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.*
- c) **Do not use accessories which are not designed and recommended by the tool manufacturer.** *Just because the accessory can be attached to your power tool, it does not assure safe operation.*
- d) **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.*
- e) **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.*
- f) **The arbour size of wheels, flanges, backing pads or any other accessory must properly fit the spindle of the power tool.** *Accessories with arbour 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.*
- g) **Do not use a damaged accessory. Before each use inspect the accessory such as backing pad for cracks, tear or excess wear. If power tool or accessory is dropped, inspect for damage to 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.*
- h) **Wear personal protective equipment. Depending on application, use a face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or workpiece fragments.** *The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtering particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.*
- i) **Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment.** *Fragments of workpiece or of a broken accessory may fly away and cause injury beyond immediate area of operation.*
- j) **Hold power tool by insulated gripping surfaces only when performing an operation where the cutting accessory may contact hidden wiring or its own cord.** *Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and shock the operator.*
- k) **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.*
- l) **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.*
- m) **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.*
- n) **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.*
- o) **Do not operate the power tool near flammable materials.** *Sparks could ignite these materials.*
- p) **Do not use accessories that require liquid coolants.** *Using water or other liquid coolants may result in electrocution or shock.*

7) 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.

- a) **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.*
 - b) **Never place your hand near the rotating accessory.** *Accessory may kickback over your hand.*
 - c) **Do not position your body in the area where power tool will move if kickback occurs.** *Kickback will propel the tool in a direction opposite to the wheel's movement at the point of snagging.*
 - d) **Use special care when working corners, sharp edges etc. Avoid bounding and snagging the accessory.** *Corners, sharp edges or bounding have a tendency to snag the rotating accessory and cause loss of control or kickback.*
 - e) **Do not attach a saw chain, woodcarving blade, or toothed saw blade.** *Such blades create frequent kickback and loss of control.*
- 8) **Safety Warnings Specific for Polishing Operations:**
- a) **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.*

WARNING: When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury, including but not limited to the following:

-READ ALL INSTRUCTIONS-

1) GROUNDING INSTRUCTIONS FOR MODEL 5, 5C and 6CE

The Cyclo Polisher should be grounded while in use to protect the operator from electric shock.

This tool is equipped with an approved three-conductor cord and three-prong grounding type plug to fit the proper grounding type receptacle. The green/yellow conductor wire in the cord is the grounding wire. **NEVER CONNECT THE GREEN/YELLOW WIRE TO A LIVE TERMINAL.**

If there is any doubt as to whether the wall receptacle is properly grounded, you should have it checked by a qualified electrician.

DO NOT UNDER ANY CIRCUMSTANCES CUT OR REMOVE THE THIRD (GROUND) PRONG FROM THE POWER CORD PLUG.

2) EXTENSION CORD

With the Orbital Polisher, use only three-wire extension cords that have three-prong grounding type plugs and three-pole receptacles that accept the tool's plug. Replace or repair damaged cords. When using this tool at a distance from the power source, a three conductor grounding type extension cord of ADEQUATE SIZE must be used for safety and to prevent the loss of power and overheating.

AMPERE 2.0 (Model 5)

Extension Cord Length	Size of Wire in Cord
0-100 feet	18 gauge
101-250 feet	16 gauge

AMPERE 1.0 (Model 5C & 6CE)

Extension Cord Length	Size of Wire in Cord
0-100 feet	18 gauge
101-250 feet	18 gauge

3) MOTOR

Your Cyclo Orbital Polisher is powered with a sturdy motor. Be certain your power supply agrees with that shown on the name plate (a.c. means alternating current). Variance in your voltage by more than 10% will mean loss of power and overheating. This tool is factory tested. Built into the motor is a thermal circuit interrupt. This device will open the power circuit if the motor windings exceed 120 – 130 C. It is not resettable, and if it the protector is activated, the motor field (stator) will have to be replaced. If it will not operate, check electric supply for blown fuses; check plug and electrical receptacle for proper contact.

ADDITIONAL SAFETY INSTRUCTIONS:

1. **Keep Work Area Clean.** Cluttered areas and benches invite injuries.
2. **Keep Children Away.** Do not let visitors contact tool or extension cord. All visitors should be kept away from work area.
3. **Store Idle Tools.** When not in use, tools should be stored in dry, and high or locked-up places - out of reach of children.
4. **Do not Force Tool.** It will do the job better and safer at the rate for which it was intended. The Cyclo[®] polisher should not have heavy weight bearing down on it.
5. **Use the Right Tool.** Do not force a small tool or attachment to do the job of a heavy-duty tool.
6. **Do not Abuse Cord.** Do not force sharp bend in cord, especially where it exits the handle and particularly when curling cord for storage.
7. **Use Proper Hearing Protection.** Prolonged exposure to tool without hearing protection could promote a loss of hearing.
8. **Maintain Tool with Care.** Keep tool clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect cord periodically and if damaged, have repaired by authorized Cyclo Toolmakers service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean, and free from oil and grease. Using compressed air, blow dry the bearings under the heads or pads, and blow away dirt or lint inside the motor case. This should only be performed with the power cord disconnected and with proper eye and other protection.
9. **Avoid Unintentional Starting.** Be sure switch is off when plugging in to power source.
10. **Use Only Outdoor Extension Cords.** Use only extension cords intended for use outdoors and so marked.
11. **Stay Alert.** Watch what you are doing. Use common sense. Do not operate tool while tired. Keep fingers away from moving parts at all times.
12. **Check Damaged Parts.** Before further use of tool, a guard or other part that is damaged should be carefully checked to determine whether it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other condition which may affect the tools operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized Cyclo Toolmakers service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced by authorized Cyclo Toolmakers service center. Do not use tool if switch does not turn tool on and off.
13. **Insulated Handles.** Do not operate the tool without the properly insulated handles. NOTE: If shrink wrap insulation on the rear metal handle is damaged or is removed at the time of repair, it must be replaced before the tool is put back into service. The proper pre-cut length is available from Cyclo Toolmakers or your dealer. When re-installing, be sure not to cover any part of the "1" or "0" (on/off) indicators embossed in the aluminum handle.
14. **Use only Cyclo Toolmakers Recommended Products.** The use of any other accessories or attachments other than those recommended in the operating instructions or the catalog may present a risk of personal injury, and could void your product warranties.

OPERATING INSTRUCTIONS

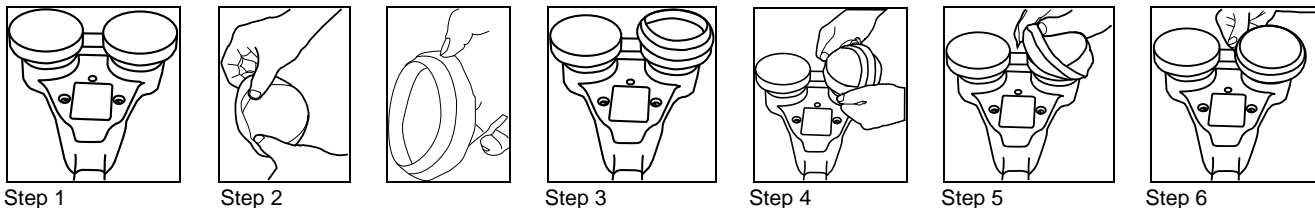
GETTING STARTED:

Your Cyclo Polisher has two heads rather than the single head you may be accustomed to seeing. As soon as the Cyclo Polisher is placed on a working surface, and switched on, orbital "hand-rubbing" action takes place. Therein lies the secret of its ability to do many different types of jobs that could not be done with a single head or rotary tools. The two heads move in a circular, overlapping motion and are counterweighted to balance. Thus, very little centrifugal force is exerted and the vibration, heat and throwing/ pulling action of a rotary tool is eliminated.

1. Determine the attachment system configuration that you intend to use – heads with Rubber Pad Holders, scrub brushes, DoublePrecision 2-sided pads, or other Genuine Cyclo Accessories. We have provided a list of the various attachment systems below.
2. Configure the polisher. We have provided instructions to assist you in the configuration of your polisher below.

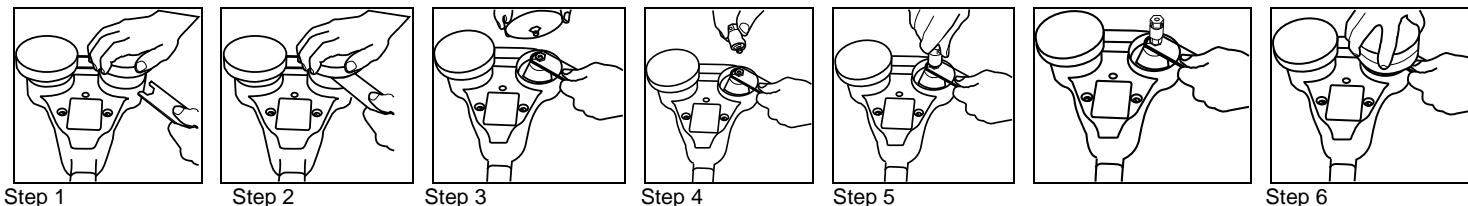
ATTACHING RUBBER PAD HOLDERS AND BONNETS:

1. Lay the polisher with heads facing up on a bench or flat surface. You can use the insert from inside the polisher box to support polisher/hold it in place or use towels.
2. Take pad holder or bonnet and turn inside out.
3. Center the inside-out pad holder or bonnet onto the head assembly.
4. Flip pad holder or bonnet over the head assembly using your thumbs to stretch the rubber holder over the head.
5. Rotate pad and stretch the other half of the pad holder or bonnet over the head assembly.
6. Use your thumbs to center the pad holder or bonnet over the head for an even fit.
7. Complete for both head assemblies.



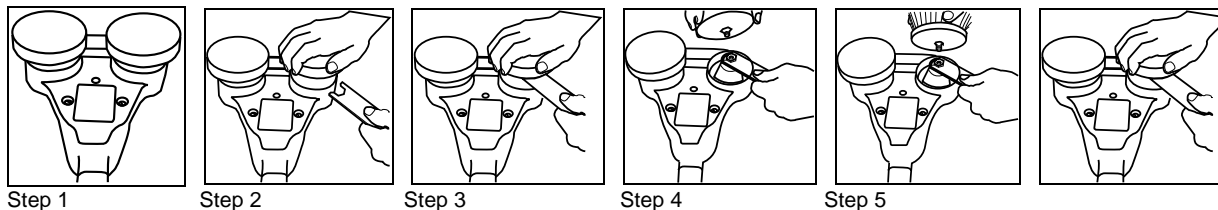
HEAD ASSEMBLY REMOVAL AND ATTACHING QUICK CONNECT ADAPTERS FOR DOUBLEPRECISION™ PADS:

1. Lay the polisher with heads facing up on a bench or flat surface. You can use the insert from inside the polisher box to support polisher/hold it in place or use towels.
2. Attach the flat wrench to the nut attached to the counterweight beneath the pad holder.
3. Hold the wrench on the counterweight nut with your left hand and turning the pad holder counter-clockwise until you can completely remove the head assembly with your right hand.
4. Leave the flat wrench attached to the counterweight nut. You will now take the Quick Connect adapter (part 79-725 5/16) and screw the adapter into the counterweight nut where the head assembly was previously located. Turn clockwise.
5. Use the flat wrench to hold the counterweight in place and once you have the Quick Connect adapter attached we recommend that you connect a DoublePrecision pad to the end of the Quick Connect adapter while the wrench is still attached to the counterweight for a final snug fit. Do not over tighten but use a firm grip and hand tighten.
6. To attach DoublePrecision pads simply line-up the center of DoublePrecision pad with the Quick Connect adapter then press firmly until you can feel the snap of the adapter accepting the pad. Pull on pad to ensure correct attachment.
7. Complete the removal and installation procedure for both head assemblies.



ATTACHING SCRUB BRUSHES:

1. Lay the polisher with heads facing up on a bench or flat surface. You can use the insert from inside the polisher box to support polisher/hold it in place or use towels.
2. Attach the flat wrench to the nut attached to the counterweight beneath the pad holder.
3. Hold the wrench on the counterweight nut with your left hand and turning the pad holder counter-clockwise until you can completely remove the head assembly with your right hand.
4. Leave the flat wrench attached to the counterweight nut. You will now take the first brush and screw it into the counterweight nut where the head assembly was previously located, turning clockwise.
5. Use the flat wrench to hold the counterweight in place and do not over tighten but use a firm grip for a hand tightening.
6. Complete the removal and installation procedure for both head assemblies.



CONFIGURING THE VES™ COUNTERWEIGHT:

Your polishers will have the new VES counterweight system with no VES weighted insert installed. You will need to install the appropriate weighted insert then install whichever attachment you will be using -- Heads with Rubber Pad Holders, Brushes, DoublePrecision Adapters, or other attachment.

1. Lay the polisher with heads facing up on a bench or flat surface. You can use the cardboard insert from inside of the polisher box to support polisher/hold it in place.
2. Determine the attachment system configuration that you intend to use – head assemblies with rubber pad holders or bonnets, carpet and scrub brushes, quick connect adapters with DoublePrecision™ pads, or other Genuine Cyclo attachments.
3. Select the appropriate VES weighted insert from the “**TABLE 1: ADJUSTABLE COUNTERWEIGHT APPLICATION TABLE**” below.
4. Thread the weighted insert into the counterweight and hand tighten using a 7/32” hex wrench (included).
5. **IMPORTANT!** Tighten VES weighted insert firmly by attaching the 5/8” flat wrench to the counterweight’s threaded nut style adapter and turn counterclockwise until you make contact with the 7/32” hex wrench. Use the 5/8” flat wrench pivoting on hex wrench to prevent counterweight from turning while tightening the weighted insert. See photos below. Turn the 7/32” hex wrench clockwise to tighten VES weighted insert firmly, but not too tight.
6. Configuration complete. You may now install the attachment system you have chosen. Instructions for installation are included in your instruction manual.

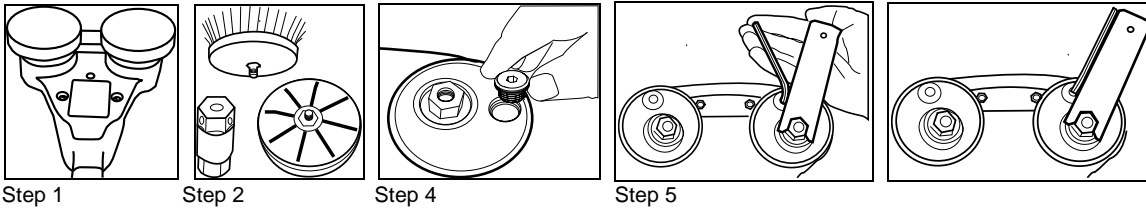



TABLE 1: ADJUSTABLE VES COUNTERWEIGHT APPLICATION TABLE

WEIGHTED INSERT (top and side views)	PART NO.& DESCRIPTION	APPLICATION
	20-076 18.75g WEIGHT, SILVER, 1 STRIPE	DOUBLEPRECISION ADAPTER AND PADS CARPET AND SCRUB BRUSHES
	20-078 32.0g WEIGHT, YELLOW WITH 2 STRIPES	HEAD ASSEMBLY WITH BONNETS OR RUBBER PAD HOLDER WITH PADS

WHY LOW VIBRATION IS IMPORTANT:

It has been proven that operators face significant risk of muscle, joint and nerve damage caused by the inherent vibration of power tools. By reducing the amount of vibration you can reduce muscle and joint fatigue as well as the potential risk for permanent damage, as described in **ISO 5349-1:2001**. Mechanical vibration -- Measurement and evaluation of human exposure to hand-transmitted vibration.

GENERAL POLISHING INSTRUCTIONS:

1. After you have placed the pads or bonnets on your Cyclo Polisher, connect the tool to the power supply.
2. Apply a small amount (about a teaspoon, or a spot the size of a dime) of the proper polish to each pad; small amounts work better than large amounts.
3. Place the Cyclo Polisher, pad side down on the surface, move the tool around before turning it on in order to distribute the polish within the pad over the surface.
4. Turn on the tool and move it back and forth and side to side across an area approximately 2' x 2' in size. This will spread the polish or deoxidizer across the surface in a latticed pattern.
5. Grip both handles of the polisher, and using only light or moderate pressure - letting the action and the weight of the tool do the work - move the polishing heads across the area at a comfortable speed. Deoxidize or polish the entire car in this manner. When you have finished, you can rub out by hand the powdery residue left from the deoxidizer or smooth out any smudges left by the glaze using a microfiber towel. We recommend our white pads/bonnets, microfiber or terry covers for removing any remaining residue.
6. If the residue does not wipe off easily, the surface is still not clean.
7. Repeat steps 2-5 as necessary.
8. As the pads become fully impregnated with polish or oxidized paint, they should be removed and washed. Never keep polish in pads overnight.



IMPORTANT POLISHER OPERATION INFORMATION –EXCESSIVE PRESSURE DOES NOT IMPROVE PERFORMANCE AND MAY DAMAGE THE POLISHER’S TRANSMISSION. The hand-like action of the polisher’s heads prevents surface damage regardless of the pressure applied. Move the machine slowly and you need not be afraid of burning the surface.

GENUINE CYCLO ACCESSORIES, POLISHES, CLEANERS & PROTECTANTS

GENUINE CYCLO FOAM AND WOOL PADS:

Always use Genuine Cyclo Toolmakers accessories with your polisher to insure proper tool performance and long pad life. Additionally, our products are designed, formulated and tested specifically for the Cyclo Dual Head Orbital Polisher.

Pads are available in three different attachment methods: Bonnets, Hook and Loop and DoublePrecision™.

1. **Bonnets** (71-SERIES) Foam permanently attached to rubber bonnets. Most durable and bonnets fit directly over Cyclo Polisher heads.
2. **Velcro** (72-SERIES) Foam discs that with integral Velcro backing for quick, easy multiple pad changes. Requires ProGuard™ Orbital Backing Plate (79-112-5/16) or Rubber Pad Holders (79-101) which fit directly over Cyclo Polisher heads.
3. **DoublePrecision™** (77-SERIES) 2-sided foam pads that attach to the polisher with the Quick Connect adapter. Requires hex adapter such as (79-725 5/16).

<u>Pad Type</u>	<u>Bonnets</u>	<u>Velcro</u>	<u>DoublePrecision™</u>
White Foam Finishing Pad	71-110	72-110	77-110
Blue Foam Polishing Pad	71-115	72-115	77-115
Green Foam Polishing Pad	71-120	72-120	77-120
White Finishing/Green Polishing Combination Foam Pad	Not available	Not available	77-110/120
Yellow Foam Cutting Pad	71-135	72-135	77-135
Orange Foam Polishing & Compounding Pad	71-145	72-145	77-145
Yellow Cutting/Orange Polishing & Comp. Comb.Foam Pad	Not available	Not available	77-135/145
Yellow Foam Scrubbing Pad	71-160	72-160	77-160
The Original Cyclo Cutting White Wool Pad	71-455	72-455	Not available
Yellow Medium Cutting Wool Pad	Not available	72-435	77-435
Blue Polishing Wool Pad	Not available	72-415	77-415

IMPORTANT PAD CARE INFORMATION – DO NOT WASH IN GASOLINE OR SOLVENTS UNDER ANY CONDITIONS. Use a mild dishwashing detergent or soap and water. For maximum life, be sure to clean bonnets and pads after each use. Immediately after washing, place bonnet on Cyclo Toolmakers Polisher and allow action of machine to shake bonnet or pad dry. The pads and bonnets should be cleaned as soon as possible after use with a good industrial cleaner or detergent in warm water. For best results, wash the foam pads out by hand, squeeze dry (do not twist or wring) and allow to air dry. The wool pile pads should also be washed with a good industrial cleaner or detergent and then run through with a brush. The wool pads can also be washed in warm water and tumble dried in a cool dryer.

GENUINE CYCLO SCRUB BRUSHES:

<u>Brush Type</u>	<u>Product Number</u>
Gray Ultra Soft Upholstery Brush	Brush (76-810)
Aqua Soft Carpet Brush	Brush (76-830)
White Standard Carpet Brush	Brush (76-840)
Black Scrub Brush	Brush (76-870)

GENUINE CYCLO PAD COVERS AND ABRASIVE DISCS:

<u>Type</u>	<u>Product Number</u>
ProShine Abrasive Discs in grades of 2400, 4000, 6000, 8000, 12000	Disc (72-702, 72-704, 72-706, 72-708 & 72-712)
Fastcut™ 600 Grit Disc	Disc (74-660)
Microfiber Suede Pad Cover	Pad Cover (73-515)
Microfiber Terry Pad Cover	Pad Cover (73-530)
Cotton Terry Pad Cover	Pad Cover (73-550)

CYCLO POLISHES, CLEANERS & PROTECTANTS:

Cyclo products are specifically formulated for use with the Cyclo Polisher and though some hand application type polishes may give satisfactory results, we recommend that for the BEST results only the laboratory and field tested Genuine Cyclo Accessories and product be used with the Cyclo Polisher.

On painted surfaces use the CTI Pro Paint Care line or the CTI One Pass Express:

CTI PRO PAINT CARE™ LINE:

1. **Heavy Compounding Gel** – Removes scratches and heavy oxidation from surface. Very aggressive compounding polish for use on any surface.
2. **Light Compounding Liquid** – Great for removing hairline scratches and medium oxidation. It's mildly aggressive and can be applied to entire painted surfaces.
3. **Cleaner-Deoxidizer** – Smooths and conditions the paint surface and removes light to medium oxidation, leaving the rejuvenated paint ready for polish or sealants.
4. **Polish and Protective Sealant** – Gives paint that lustrous shine it had when new, and gives tough-as-nails protection for up to 18 months.

CTI ONE PASS EXPRESS™:

1. **Cleaner-Polish-Sealant** – With just one step you can do it all. Remove oxidation and scratches. Rejuvenate a dull finish. Protect the mirror shine from the elements.

On unpainted aluminum or stainless steel use the CTI Metal Polish:

CTI METAL POLISH:

1. **Free Flite™ Cleaner-Polish** – With one easy step this aggressive rubbing compound removes corrosion, oxidation and surface film while also leaving a polished finish that is absolutely stunning. For quality that meets high government standards for its aircraft, insist on Free Flite™ Cleaner-Polish
2. **Free Flite™ Protective Sealant** – Specially formulated to bond to bare metal, allowing you to deoxidize the surface and effortlessly remove finishing scratches. Plus, its protective coat helps prevent further oxidation.

USER MAINTENANCE AND TROUBLESHOOTING

Below are instructions on care and maintenance of your polisher. You can also visit our website at www.cyclotoolmakers.com for tutorials and video instructions on proper tool care and maintenance.

MOTOR:

Always be sure the polisher is disconnected from the electrical outlet before any inspection or maintenance is performed.

The motor is only for the voltage specified on the nameplate. Voltage should not vary more than 10% over or under the voltage shown on the nameplate. Although the Cyclo Polisher is built to last a lifetime, it can encounter problems from heavy wear and tear. All problems are repairable, and can most often be repaired by the user.

If the Cyclo Polisher fails to start:

If your polisher fails to start, unplug your polisher from the outlet or power source.

1. Check your power cord plug for bent prongs that could be preventing proper contact with the outlet.
2. Check your power cord for areas of worn or cracked insulation. If any of these are noted, **DO NOT CONTINUE TO OPERATE** the tool. **IMMEDIATELY** contact Cyclo Toolmakers or your dealer to have your tool repaired and serviced.
3. Check your source of power for blown fuses or open circuit breakers in the line. Also verify that your power source is providing adequate voltage and current to safely operate your polisher.

If your polisher starts to arc, experiences a loss in torque, seems to be running hotter than normal or has stopped during operation:

Turn off your polisher and **DO NOT CONTINUE TO OPERATE** the tool. Continuing to use your tool will cause further damage or completely short the tool. Unplug your polisher from the outlet or power source, and proceed through the following steps or contact Cyclo Toolmakers or your dealer to have your tool repaired and serviced:

1. Clean your tool of dirt, fiber, and other debris by blowing it out with compressed air.
 - a. This is recommended maintenance for every 8 hours of operation or as conditions warrant. If tool is being used on carpets or with wool pads/bonnets, it is recommended to blow out your tool after every use. If the tool should get wet, also blow out the underside of the tool. If the tool has gotten wet, you may need to allow the tool to completely dry before you are able to completely blow out all the fibers and other debris.
2. Check the carbon brushes, brush holder and brush holder caps.
 - a. The carbon brushes in your polisher are wear items and periodically will need to be replaced. The carbon brushes that are used in your polisher have a stop built into them that will shut off the polisher when they need to be replaced. Never operate your polisher with chipped or cracked brush holder caps. Refer to the images to the right for examples of good and worn parts. You may also refer to the "Instructions for Inspecting and Replacing the Brushes and Brush Holders" at www.cyclotoolmakers.com for instructions on removing, inspecting and replacing the brushes and brush holders in your polisher as well as inspecting and cleaning your brush holder caps. Since brushes are wear items, we recommend that you keep a spare set of brushes. Please note that some specialty tools are required for replacing the brush holders. It is recommended that you have Cyclo Toolmakers or your dealer perform this service.
3. If the previous steps have not determined the problem, please return your polisher to Cyclo Toolmakers or your dealer for a complete diagnosis. Please include a complete description of the problem, the conditions under which the polisher stopped or is operating incorrectly, and results of the previous steps. Please also include all your contact information, both address and phone numbers, so that you can be contacted with an estimate to repair your polisher. There will be no charge for items that are covered by warranty.

If you have any questions or need to locate a Cyclo repair center, please do not hesitate to contact us at 1-303-485-1990.

HOW TO MAINTAIN YOUR CYCLO POLISHER:

1. Every eight hours of use, lubricate the upper motor bearing by placing 3 drops of light machine oil (e.g. 3-in-1 oil) in the center of the copper bushing found at the top of the motor housing.

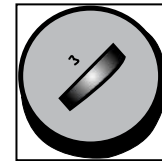
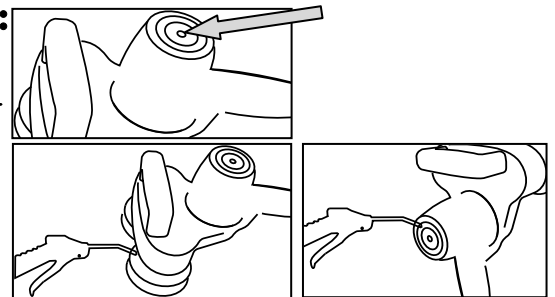


2. Every eight hours of use, or as conditions warrant, blow out the motor housing with compressed air to clean out any accumulated dust or dirt. If the tool is being used to clean carpets, be sure to blow out the motor housing after every use. If tool should get wet, be sure to blow dry the underside of the tool.



3. Never operate the polisher with chipped or otherwise damaged brush holder caps. Be sure the power cord is disconnected. Using a screwdriver, remove the damaged brush holder

cap and the carbon brush and spring, with a cotton Q-tip wipe the threads on the inside of the brush holder clean of any foreign matter, replace the carbon brush and spring and screw on a new brush cap.



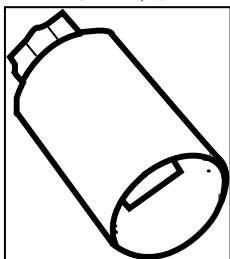
Good Brush Holder Cap



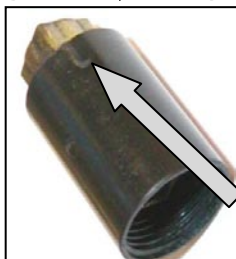
Bad Brush Holder Cap

ANY OTHER SERVICING SHOULD BE PERFORMED BY AN AUTHORIZED CYCLO SERVICE CENTER OR THE TOOL SHOULD BE SENT TO CYCLO TOOLMAKERS, INC.

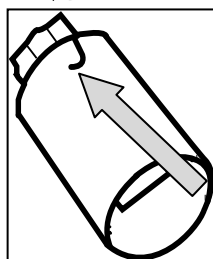
INSPECTING THE BRUSHES AND BRUSH HOLDERS:



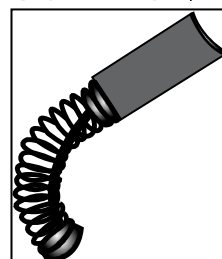
Good Brush Holder



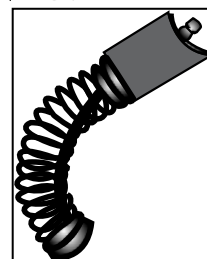
Bad Brush Holder (photo and illustration) – Look for scarring or marking on surface of brush holder. These may be electrical shorts.



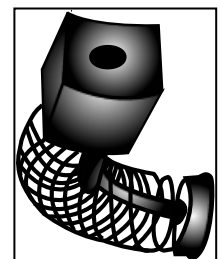
Good Brush



Bad Brush – Stop exposed



Bad Brush – Missing stop & worn



LUBRICATION:

This tool was properly lubricated at the factory and is ready to use. The gears should be inspected after approximately 400 hours of use. If necessary, re-lubricate with Texaco Multifax #2 or equivalent.

TIMING:

The secret of the operation of your Cyclo Polisher lies in the fact that the two heads are timed exactly 1/2 turn apart. This is necessary for the balanced operation of the tool. If the machine is disassembled, use the following procedures to insure proper timing of the heads.

- 1) Turn the tool's main case upside down, with the motor case, cover plate, and idler gear removed. Move the two heads together as close as possible. Then, put a heavy rubber band around the side of the two heads to keep them together.
- 2) Turn the tool right side up and carefully replace the idler gear without moving the drive gears. Now, pack the recessed well in back of the idler gear with lubricant. Also, lubricate the metal shafts in the center of each gear.
- 3) Reassemble the cover plate and motor case and remove the rubber band.

BEARINGS:

The bearings in the counterweights will loosen slightly with continued long use. This actually improves the action of the tool by allowing the heads to tilt slightly and follow a contoured surface better. These bearings should not be considered defective until they become objectionably noisy at which time the entire polisher should be sent to an authorized Cyclo service center for repair.

HEADS:

The twin heads of the polisher will wear out gradually with use and should be replaced when they no longer hold the polishing bonnets firmly in position. Simply turn the polisher upside down (so the twin heads are facing up), rest the polisher on a counter or on your lap. Slide a flat 5/8" wrench between the head and the counterweight. With the wrench in one hand and the head in the other, twist the head counterclockwise until the threaded shaft is completely clear of the nut. Oil the nut threads slightly and reverse the above procedure to attach new heads or brushes. Be sure to screw the head of brush straight into the counterweight nut. If the shaft seems to be screwing into the nut with difficulty, back it out and start over again. Be sure to tighten the heads or brushes snugly into the nut or the polisher will vibrate badly when in use.

CYCLO TOOLMAKERS, INC. ONE-YEAR LIMITED WARRANTY

This written warranty protects your investment.

CYCLO TOOLMAKERS, INC. WARRANTS this machine to the original purchaser to be free from material or workmanship defects for a period of ONE-YEAR from the date of purchase but no longer than two-years from date of manufacture. Our obligations under this warranty are expressly limited to replacement or repair of such parts as we determine to be defective and the labor required for installations. Our obligation is limited to performing repairs in our U.S. factory location (address below). Your Cyclo dealer may provide local services at its own option. If you ship your product to us for repair, and your claim for service is covered by this warranty, we will pay the return freight cost to places within the 48 contiguous United States, but not to other locations.

Conditions resulting from misuse, negligence, alterations, accidents, damage caused by improper use of chemicals, repair by unauthorized parties, or "wear and tear" from normal usage, are not covered. Disassembly of the tool may also void this warranty.

This warranty does not cover damage to machine occurring in shipment, nor damage caused by alterations, fire, accidents, force majeure, misuse or abuse.

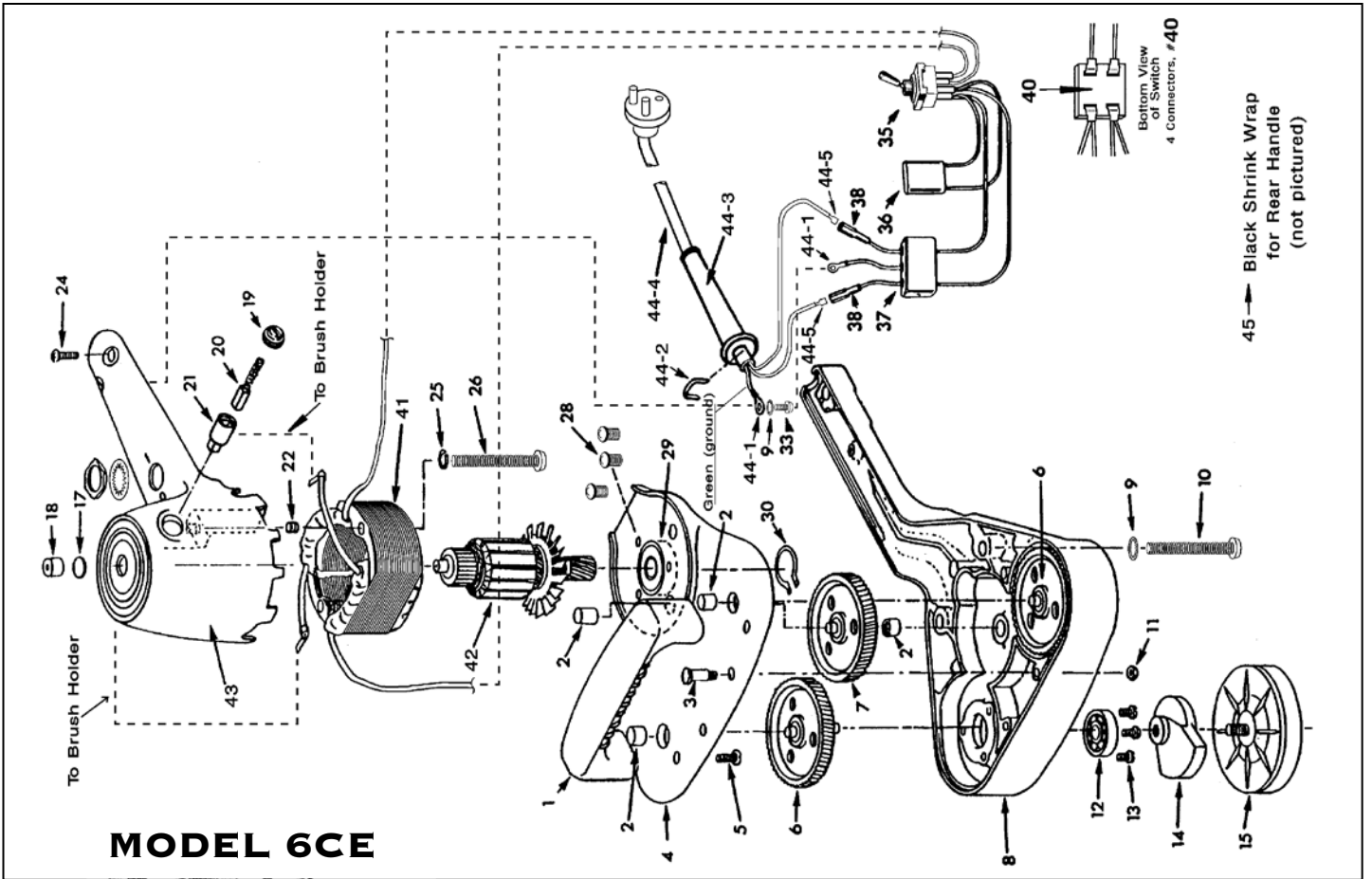
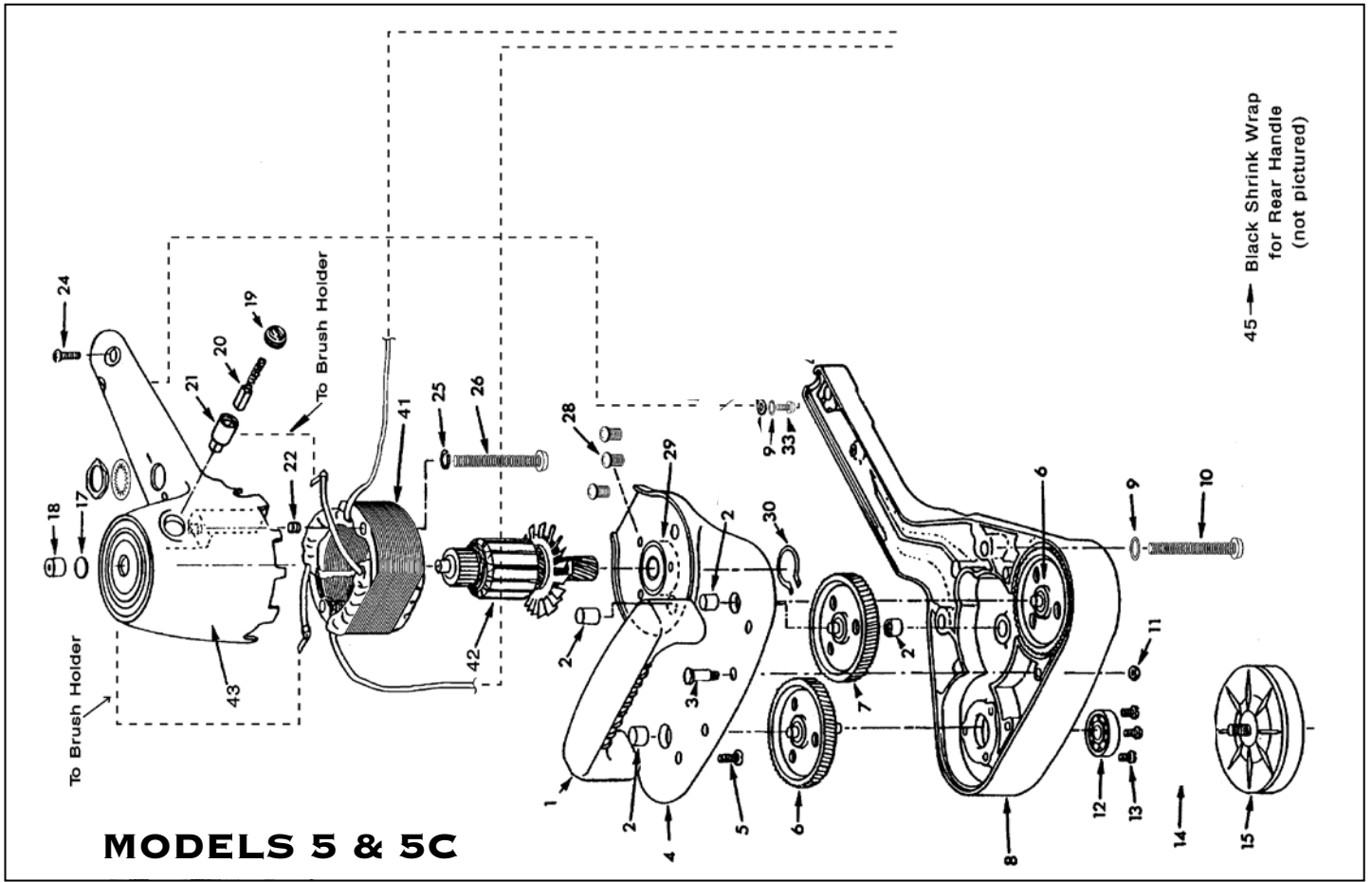
To invoke coverage under this warranty you, the (end user purchaser), must register within 15 days of purchase and provide proof of purchase (sales receipt) when requesting warranty service.

We recommend that only Genuine Cyclo accessories be used with this machine. Our products are specifically designed, formulated and tested for product capability.

This warranty is in lieu of all other warranties, expressed or implied, and we do not assume any other liability in connection with the sale of this product. No claim for consequential damage shall be allowed.

SENDING YOUR CYCLO POLISHER IN FOR REPAIR:

- Please attach a note answering the following questions:
 - Is your tool under warranty? (Enclose proof of purchase)
 - Would you like an estimate, or a repair?
 - If you would like your tool repaired, please indicate that Cyclo Toolmakers, Inc. has permission to make repairs costing up to \$100. We can only repair your tool if you have provided us with your credit card information. For all repairs over \$100, Cyclo will contact you to confirm the price before making any repairs.
 - What is wrong with your tool?
- If your tool is not claimed within 30 days after repair quotation (when not in warranty), your tool will be disposed of. If \$10 was included for return shipping, we will return the polisher to the address given.
- Repair labor is \$50/hour.
- It can take up to 2 weeks or longer after receipt to provide an estimate or repair.
- Send repairs to: Cyclo Toolmakers, Inc. ATTN: Service Dept. 1740 Skyway Drive Bldg. C Longmont, CO 80504 U.S.A.



CYCLO TOOLMAKERS, INC. DUAL HEAD ORBITAL POLISHER PARTS LIST

Indicator Number	Part Number	Description
1	12-560-ASSY	Handle, Plastic Front, Polisher
2	50-010	Needle Bearing
3	11-080	Short Shoulder Bolt for Retaining Cover Plate
4	10-020-a	Metal Cover Plate
5	20-190	Screw, Handle Retaining
6	60-010-a	Nylon Drive Gear, Connects to Counterweight
7	60-020-a	Nylon Idler Gear (Center Gear)
8	10-010-a	Main Gear Case
9	22-160	Washer, Lock, Star
10	20-500	Screw, Metal Housing Retaining
11	22-520	Nut For Front Shoulder Bolt
12	50-040	Bearing, Main Drive Gear
13	20-180	Screw, Main Bearing Retaining
14	60-030-a	Counterweight Assembly (with bearing)
15	60-055-a	Head Assembly (connects to 60-030 Counterweight Assembly)
16	10-040-a	Motor Case, Models 5 or 5C
17	51-705	Oiler Felt for Bronze Bearing
18	50-020	Bronze Bushing
19	30-525	Brush Holder Caps
20	30-500	Carbon Brush, Countoured Spring, and Dead Stop
21	30-515	Carbon Brush Holder
22	21-020	Screw, Brush Holder Retaining
23	30-300	Field 115V, 60Hz
24	20-020	Screw, Rear Handle
25	22-010	Split Lock Washer For Field Retaining Screw
26	20-100	Screw, Field Retaining
27	30-200	Armature, 115V, 60Hz
28	20-080	Screw, Motor Bearing Hold
29	50-030	Bearing, Lower Motor
30	51-710	Lock Ring for Pinion Gear
31	30-010	Switch, Single Pole, Single Throw, 230V, Model 5 and 5C
32	31-800	Crimp-on Wire Connector
33	20-060	Screw, Grounding
34	31-000-a	Power Cord Assembly, U.S.A. Standard.
35	30-020	Switch, Double Pole, Single Throw, 230V, Model 5CE
36	30-030	Noise Suppression Capacitor
37	30-040	RFI Power Line Filter
38	31-815	Terminal, Nylon Female Quick Disconnect
39	31-820	Male Connector
40	31-825	Female Connector
41	30-320-GR	Field, 230V - 50Hz,
42	30-220-GR	Armature, 230V - 50Hz
43	10-045-a	Motor Case, Model 5CE
44	31-025-a	Power Cord Assembly, European CE Standard
45	99-900	Shrink Wrap, Rear Handle (Unit of Measure = 6 inches)
46	20-072, -076, -078	VES Weighted Inserts (Unit of Measure = each) Please refer to pages 6 or 12 for additional information

IMPORTANT INFORMATION: *–GR armatures work with –GR fields only, and standard armatures work with standard fields only. Do not mix types. When ordering parts please specify Polisher Model Number, Part Number and Part Description; provide serial number if not sure which version of part is required.*

GENUINE CYCLO ACCESSORIES PRODUCT NUMBER REFERENCE CHART

Part Number	Description
Attachment Methods	
79-101	Rubber Pad Holder w/Velcro Hook (need one per head)
79-725-5/16	DoublePrecision™ Quick Connect Adapter for 2-Sided Pads (need one per side)
79-112-5/16	ProGuard™ Orbital Backing Plate (need one per side)
77-920	DoublePrecision™ ProShine™ Interface Pad (need one per side)
79-920	ProShine™ Interface Pad (need one per side)
Foam Bonnets and Pads	
71-110	White Foam Finishing Bonnet
72-110	White Foam Finishing Pad w/ Loop
77-110	White Foam Finishing DoublePrecision™ 2-Sided Pad
72-115	Blue Foam Finishing Pad w/ Loop
77-115	Blue Foam Finishing DoublePrecision™ 2-Sided Pad
71-120	Green Foam Polishing Bonnet
72-120	Green Foam Polishing Pad w/ Loop
77-120	Green Foam Polishing DoublePrecision™ 2-Sided Pad
77-110/120	White Finishing/Green Polishing Combination Foam DoublePrecision™ 2-Sided Pad
71-135	Yellow Foam Cutting Bonnet
77-135	Yellow Foam Cutting DoublePrecision™ 2-Sided Pad
72-135	Yellow Foam Cutting Pad w/ Loop
71-145	Orange Foam Compounding & Polishing Bonnet
72-145	Orange Foam Compounding & Polishing Pad w/ Loop
77-145	Orange Foam Compounding & Polishing DoublePrecision™ 2-Sided Pad
77-135/145	Yellow Cutting/Orange Compounding & Polishing Combination Foam DoublePrecision™ 2-Sided Pad
71-160	Yellow Foam Scrubbing Bonnet
72-160	Yellow Foam Scrubbing Pad w/ Loop
Wool Bonnets and Pads	
72-415	Blue Polishing Wool Pad w/Loop
77-415	Blue Polishing Wool DoublePrecision™ 2-Sided Pad
72-435	Yellow Medium Cutting Wool Pad w/Loop
77-435	Yellow Medium Cutting Wool DoublePrecision™ 2-Sided Pad
71-455	The Original Cyclo Cutting Wool Pad Bonnet
72-455	The Original Cyclo Cutting Wool Pad w/ Loop
Pad Covers	
73-550	Cotton Terry Pad Cover
73-530	Microfiber Terry Pad Cover
73-515	Microfiber Suede Pad Cover
Scrub Brushes	
76-810	Gray Ultra Soft Upholstery Brush
76-830	Aqua Soft Carpet Brush
76-840	White Standard Carpet Brush
76-870	Black Stiff Scrub Brush
Abrasive Discs	
74-660	Fastcut™ Deox Pads, 600 Grit
72-702	ProShine™ 2400 Grade Cushioned Abrasive Pad w/ Loop
72-704	ProShine™ 4000 Grade Cushioned Abrasive Pad w/ Loop
72-706	ProShine™ 6000 Grade Cushioned Abrasive Pad w/ Loop
72-708	ProShine™ 8000 Grade Cushioned Abrasive Pad w/ Loop
72-712	ProShine™ 12000 Grade Cushioned Abrasive Pad w/ Loop
Vibration Elimination System (VES™) Components	
20-072	VES Weighted Insert Blue
20-076	VES Weighted Insert Silver
20-078	VES Weighted Insert Yellow
Tools	
85-810	Flat Wrench for removing heads and scrub brushes
85-820	L Hex-Key 7/32 (Standard Hex/short) wrench for removing VES weighted inserts

JOIN ORBIT CLUB TODAY

Join the Cyclo Toolmakers' Orbit Club and you'll receive preferred customer discounts, special news, usage tips, and exclusive members-only offers. Simply go online and provide us with your email address. Just visit the Cyclo website at www.cyclotoolmakers.com and click the Orbit Club link to sign up. Then, you'll be the first to receive:

- Performance tips to increase productivity
- News and events to improve your business
- Special offers and product news

We look forward to seeing you there!

Send orders to your Cyclo Toolmakers dealer. If you need information on a dealer in your area, please visit our website at www.cyclotoolmakers.com or email us at orders@cyclotoolmakers.com.

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LOOK FOR THE SPACE-AGE BODY WITH THE ORBITING HEADS.

Polisher configuration, including tapered conical motor housing, dual heads, and t-grip. Handle, is a design trademark of Cyclo Toolmakers, Inc., © 2005-2008 Cyclo Toolmakers, Inc.