

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

Dayton® Buffers

Description

Dayton Buffers are equipped with a totally enclosed ball bearing motor. Armature assembly is dynamically balanced for smooth operation. Motor housing is compact so long pieces of work can press against both buffing wheels without touching the motor frame. Buffing wheels are included

The 6" Buffer, 4TJ99B, operates at a single speed of 3450 rpm. The 8" Buffer, 1FYV4, operates at 3450 rpm and also can be operated at any speed from 2000 to 3300 rpm.

Unpacking

Check for shipping damage. If damage has occurred, a claim must be filed with the carrier immediately. Check for completeness. Immediately report missing parts to dealer.

Specifications

Model	HP	RPM	AMPS	Volts	Hz
4TJ99B	1/2	3450	5.0	120	60
1FYV4	3/4	3450	7.0	120	60

1FYV4 Variable speed range2000-3300; 3450 RPM

SIZES

4TJ99B: 6" Dia., 1/2" Bore
1FYV4: 8" Dia., 5/8" Bore

General Safety Information

▲WARNING For your own safety, read operating instructions manual before operating tool.

BE PREPARED FOR JOB

1. Wear proper apparel. Do not wear loose clothing, gloves, neckties, rings, bracelets or other jewelry which may get caught in moving parts of machine.
2. Wear protective hair covering to contain long hair.
3. Wear safety shoes with non-slip soles.
4. Wear safety glasses complying with United States ANSI Z87.1. Everyday glasses have only impact resistant lenses. They are **NOT** safety glasses.

5. Wear face mask or dust mask if operation is dusty.
6. Be alert and think clearly. Never operate power tools when tired, intoxicated or when taking medications that cause drowsiness.

PREPARE WORK AREA FOR JOB

1. Keep work area clean. Cluttered work areas invite accidents.
2. Do not use power tools in dangerous environments. Do not use power tools in damp or wet locations. Do not expose power tools to rain.
3. Work area should be properly lighted.
4. Proper electrical plug should be plugged directly into properly grounded, three-prong receptacle.
5. Extension cords should have a grounding prong and the three wires of the extension cord should be of the correct gauge.
6. Keep visitors at a safe distance from work area.
7. Keep children out of the workplace. Make workshop childproof. Use padlocks, master switches or remove switch keys to prevent any unintentional use of power tools.

TOOL SHOULD BE MAINTAINED

1. Always unplug tool prior to inspection.

2. Consult manual for specific maintaining and adjusting procedures.
3. Keep tool clean for safest operation.
4. Remove adjusting tools. Form habit of checking to see that adjusting tools are removed before turning machine on.
5. Keep all parts in working order. Check to determine that the guard or other parts will operate properly and perform their intended function.
6. Check for damaged parts. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other condition that may affect a tool's operation.
7. Do not perform makeshift repairs. (Use the parts list to order repair parts.)

KNOW HOW TO USE TOOL

1. Use right tool for job. Do not force tool or attachment to do a job for which it was not designed.
2. Disconnect tool from power when changing accessories such as buffing wheels and the like.
3. Avoid accidental start-up. Make sure that the switch is in the OFF position before plugging in.
4. Do not force tool. It will work most efficiently at the rate for which it was designed.
5. Keep hands away from moving parts and buffing surfaces.
6. Never leave a tool running unattended. Turn the power off and do not leave tool until it comes to a complete stop.
7. Do not overreach. Keep proper footing and balance.
8. Never stand on tool. Serious injury could occur if tool is tipped over.

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General Safety Information (Continued)

9. Know your tool. Learn the tool's operation, application and specific limitations.
10. Use recommended accessories. Understand and obey all safety instructions supplied with accessories. The use of improper accessories may cause risk of injury to persons.
11. Do not over tighten wheel nut. Use only flanges supplied with the buffer.
12. Handle the workpiece correctly.

Assembly

Refer to Figures 3 and 4.

Buffer comes completely assembled with hex nuts, wheel flanges and spacers (Ref. Nos. 1, 2, 3 and 11) packed separately. One spiral sewn wheel and one soft wheel are included.

IMPORTANT: Do not attempt assembly if parts are missing. Use this manual to order repair parts.

INSTALL BUFFING WHEELS

To install buffing wheels on the buffer:

1. Remove plastic protective sleeves from armature shaft.
2. Slide spacer (Ref. No. 3) onto armature shaft.
3. Slide inner wheel flange (Ref. No. 2) onto armature shaft.
4. Slide in buffing wheel on to the armature shaft and butt it against the inner wheel flange.
5. Slide in the outer wheel flange and butt the flat side of the flange against the buffing wheel.
6. Tighten hex nut (Ref. No. 1) on to the armature shaft. Make sure the

buffing wheel is firmly held in place and the hex nut is snug against the outer wheel flange. Use additional spacers (not supplied) if required.

7. Repeat steps 1-6 to install buffing wheel on the other side of the buffer.

Installation MOUNT BUFFER

1. Mount buffer to a solid horizontal surface (hardware not provided). If mounted to metal pedestal, align mounting holes with corresponding holes in pedestal. Insert a 1/4-20 x 1 1/4" hex head bolt with flat washer through base of buffer. From bottom of pedestal, place a 1/4" flat washer and 1/4"-20 hex nut onto the bolt. Tighten only until space between buffer base and pedestal is 1/8". Using second nut on each bolt, jam tighten against the first to prevent loosening by vibration.
2. To mount buffer to wooden bench top, use 1/4 x 1 1/4" wood screws with flat washers beneath heads. Tighten screws until space between buffer base and bench top is 1/8".

GROUNDING INSTRUCTIONS

⚠ WARNING *Improper connection of equipment grounding conductor can result in the risk of electrical shock. Equipment should be grounded while in use to protect operator from electrical shock.*

Check with a qualified electrician if grounding instructions are not understood or if in doubt as to whether the tool is properly grounded.

This buffer is equipped with an approved 3-conductor cord rated at 300V and a 3-prong, grounding type plug (See Figure 1) for your protection against shock hazards.

Grounding plug should be plugged directly into a properly installed and grounded 3-prong grounding-type receptacle (See Figure 1).

Properly Grounded Outlet

Grounding Prong

3-Prong Plug

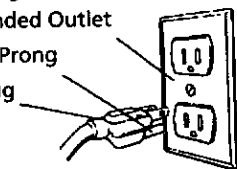


Figure 1 - 3-Prong Receptacle

Do not remove or alter grounding prong in any manner. In the event of a malfunction or breakdown, grounding provides a path of least resistance for electrical shock.

⚠ WARNING *Do not permit fingers to touch the terminals of plug when installing or removing from outlet.*

Plug must be plugged into matching outlet that is properly installed and grounded in accordance with all local codes and ordinances. Do not modify plug provided. If it will not fit in outlet, have proper outlet installed by a qualified electrician. Inspect tool cords periodically, and, if damaged, have repaired by an authorized service facility.

Green (or green and yellow) conductor in cord is the grounding wire. If repair or replacement of the electric cord or plug is necessary, do not connect the green (or green and yellow) wire to a live terminal.

Where a 2-prong wall receptacle is encountered, it must be replaced with a properly grounded 3-prong receptacle installed in accordance with National Electric Code and local codes and ordinances.

⚠ WARNING *This work should be performed by a qualified electrician.*

Models 1FYV4 and 4TJ99B

Installation (Continued)

A temporary 3-prong to 2-prong grounding adapter (See Figure 2) is available for connecting plugs to a two pole outlet if it is properly grounded.

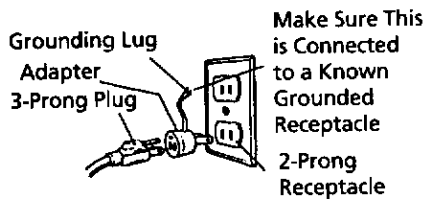


Figure 2 – 2-Prong Receptacle

Do not use a 3-prong to 2-prong grounding adapter unless permitted by local and national codes and ordinances.

(A 3-prong to 2-prong grounding adapter is not permitted in Canada.) Where permitted, the rigid green tab or terminal on the side of the adapter must be securely connected to a permanent electrical ground such as a properly grounded water pipe, a properly grounded outlet box or a properly grounded wire system.

Many cover plate screws, water pipes and outlet boxes are not properly grounded. To ensure proper ground, grounding means must be tested by a qualified electrician.

EXTENSION CORDS

1. The use of any extension cord will cause some drop in voltage and loss of power.
2. Wires of the extension cord must be of sufficient size to carry the current and maintain adequate voltage.

3. Running the unit on voltages which are not within $\pm 10\%$ of the specified voltage may cause overheating and motor burnout.
4. Use the table to determine the minimum wire size (A.W.G.) extension cord.
5. Use only 3-wire extension cords having 3-prong grounding type plugs and 3-pole receptacles which accept the tool plug.
6. If the extension cord is worn, cut or damaged in any way, replace it immediately.

EXTENSION CORD LENGTH

Wire Size	A.W.G.
Up to 25 ft.	18
25 to 50 ft.	16

NOTE: Using extension cords over 50 ft. long is not recommended.

ELECTRICAL CONNECTIONS

⚠ WARNING *All electrical connections must be performed by a qualified electrician. Make sure tool is off and disconnected from power source while motor is mounted, connected, reconnected or anytime wiring is inspected.*

Motor is assembled with approved, 3-conductor cord to be used at 120 volts only. Buffers are prewired at the factory for 120 volts.

Operation

⚠ WARNING *Always wear safety glasses complying with United States ANSI Z87.1 (shown on package) before commencing power tool operation. Safety glasses are available through your Grainger catalog.*

1. Keep a steady, moderate pressure on the work and keep it moving at an even pace for smooth buffing.
2. Pressing too hard overheats the motor and prematurely wears down the buffing wheels.
3. The buffing wheel should rotate into object being buffed.

Maintenance

1. Replacement wheels must have a minimum rated speed of 3600 RPM.
2. Maximum wheel diameter is 6" for 4TJ99B and 8" for 1FYV4.
3. Disconnect unit from power source before replacing buffing wheels or before performing any maintenance work.
4. The threads on the right side of the buffer (facing unit) are right hand; threads on the left side are left hand. Hold the wheels firmly to loosen the hex nut.
5. Make sure hex nuts are tight and snug against the outer wheel flange prior to restarting buffer.

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For Repair Parts, call 1-800-323-0620

24 hours a day - 365 days a year

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

Address parts correspondence to:

Grainger Parts
P.O. Box 3074
1657 Shermer Road
Northbrook, IL 60065-3074 U.S.A.

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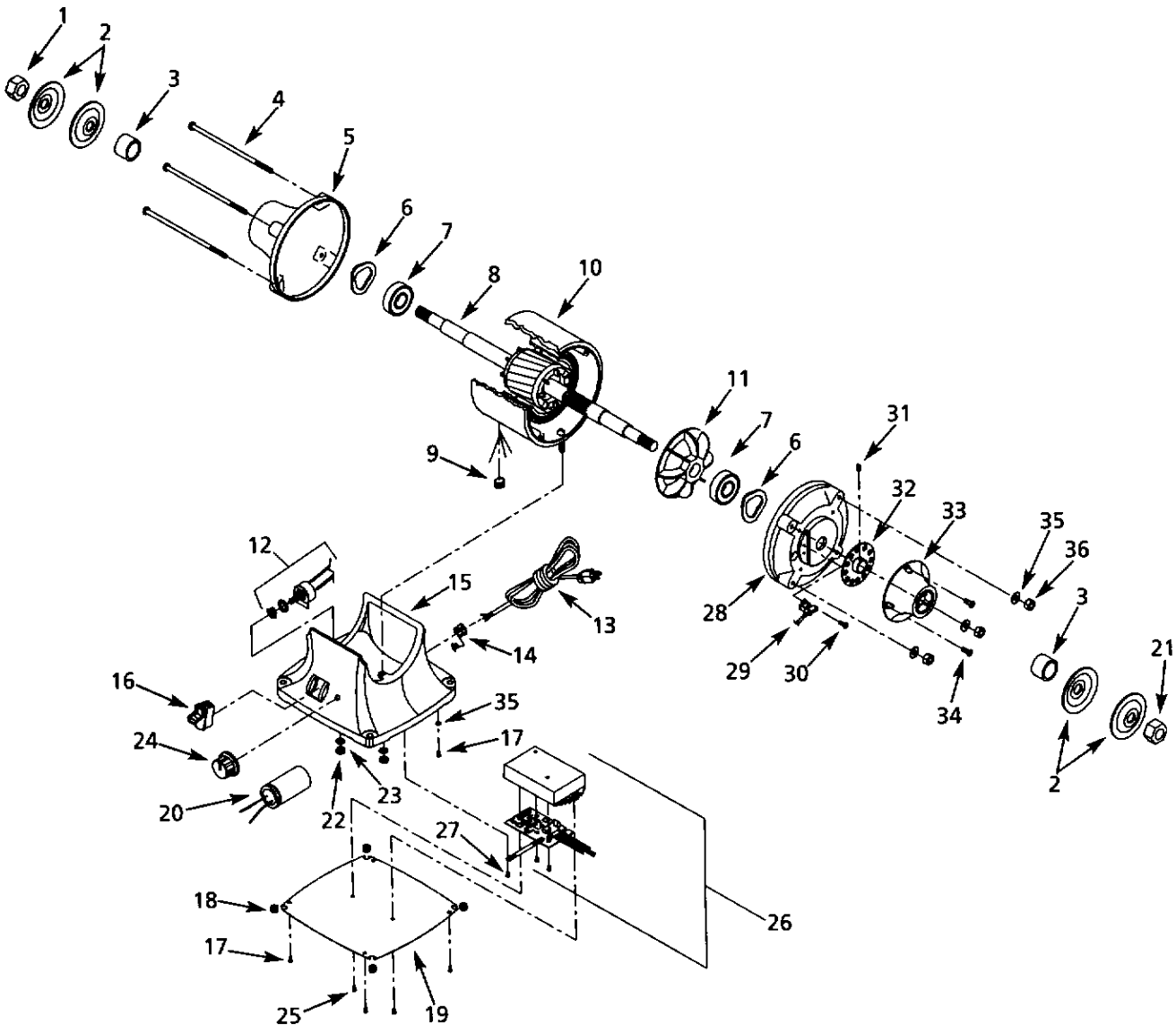


Figure 3 — Repair Parts Illustration for 8" Buffer

Repair Parts List for 8" Buffer

Reference Number	Description	Part Number	Quantity
1	5/8"-11 Hex nut (LH Thread)	00088.00	1
2	Wheel flange	00089.00	4
3	Spacer	23985.00	2
4	5-0.8 x 228mm Flange screw	16654.00	4
5	Endshield	23986.01	1
6	Wavy washer	16640.00	2
7	6204ZZ Bearing	1L017	2
8	Armature	†	1
9	Grommet	01066.00	1
10	Stator with housing	†	1
11	Motor fan	23987.00	1
12	Variable switch	22044.00	1
13	Line cord	00090.00	1
14	Strain relief	04055.00	1
15	Base	24548.00	1
16	Switch with key	08066.00	1
17	#10-24 x 1/4" Pan head screw	*	5
18	Bumper	23991.00	4
19	Cover	23758.00	1
20	Capacitor	16895.00	1
21	5/8"-11 Hex nut	00087.00	1
22	1/4"-20 Hex nut	*	2
23	1/4" Lock washer	*	2
24	Knob	22046.00	1
25	4-1.4 x 8 mm Thread forming screw	09652.00	2
26	Circuit board assembly	22047.00	1
27	4-0.7 x 8mm Pan head screw	00781.00	1
28	Endshield	24551.00	1
29	Sensor	18000.00	1
30	3-0.5 x 6mm Pan head screw	05990.00	2
31	4-0.7 x 5mm Set screw	05474.00	1
32	Plate	18634.00	1
33	Endshield cap	24552.00	1
34	#10-24 x 3/8" Flange screw	03207.00	4
35	#10 Serrated washer	*	5
36	5-0.8mm Hex nut	*	4
	Recommended Accessories		
Δ	Cast iron tool stand	4Z154	1
Δ	Cotton buffing wheel	5A725	1
Δ	Soft buffing wheel	6A826	1

(Δ) Not shown.

(†) Not available as repair part.

(*) Standard hardware item, available locally.

For Repair Parts, call 1-800-323-0620

24 hours a day – 365 days a year

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

Address parts correspondence to:

Grainger Parts
P.O. Box 3074
1657 Shermer Road
Northbrook, IL 60065-3074 U.S.A.

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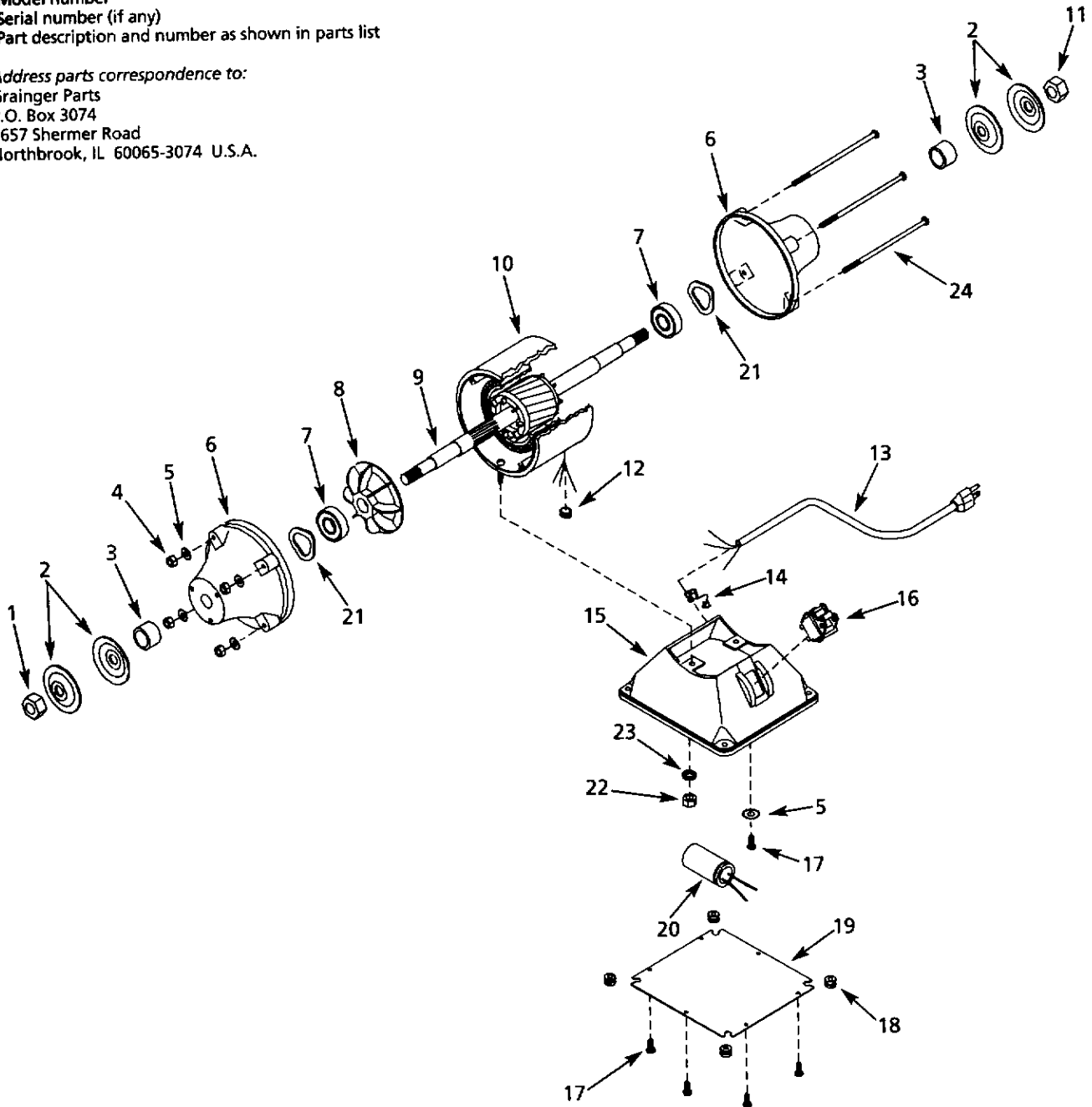


Figure 4 — Repair Parts Illustration for 6" Buffer

Repair Parts List for 6" Buffer

Reference Number	Description	Part Number	Quantity
1	1/2"-12 Hex nut (LH Thread)	00064.00	1
2	Wheel flange	23754.00	4
3	Spacer	24545.00	2
4	5-0.8mm Hex nut	*	4
5	#10 Serrated washer	*	5
6	Endshield	16617.01	2
7	6202ZZ Bearing	1L015	2
8	Motor fan	24547.00	1
9	Armature	†	1
10	Stator with housing	†	1
11	1/2"-12 Hex nut	00548.00	1
12	Grommet	01066.00	1
13	Line cord	00067.00	1
14	Strain relief	04055.00	1
15	Base	23757.00	1
16	Switch with key	08066.00	1
17	#10-24 x 1/4" Pan head screw	*	7
18	Bumper	23991.00	4
19	Cover	23758.00	1
20	Capacitor	23759.00	1
21	Wavy washer	08283.00	2
22	1/4"-20 Hex nut	*	2
23	1/4" Lock washer	*	2
24	5-0.8 x 200mm Flange screw	04040.00	4
Δ	Spiral sewn buffing wheel	23763.00	1
Δ	Soft buffing wheel	23762.00	1
	Recommended Accessories		
Δ	Cast iron tool stand	4Z154	1
Δ	Cotton buffing wheel	5A724	1
Δ	Soft buffing wheel	6A825	1

(Δ) Not shown.

(†) Not available as repair part.

(*) Standard hardware item, available locally.

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Troubleshooting Chart

Symptom	Possible Cause(s)	Corrective Action
Buffer won't start	1. Blown line fuse or tripped circuit breaker	1. If fuse is blown, replace with fuse of proper size. If breaker tripped, reset it
	2. Low line voltage	2. Check power supply for voltage and correct as needed
	3. Defective switch	3. Replace switch
	4. Defective, blown capacitor	4. Replace capacitor
	5. Defective circuit board	5. Replace circuit board
Excessive vibration	1. Improper mounting of buffer	1. Remount buffer
	2. Buffing wheels not balanced.	2. Remount wheels, but rotate one wheel 90° with respect to its previous position. Other wheel should remain in its original position
Motor overheating	1. Excessive pressure required to buff workpiece	1. Worn wheel; replace
	2. Buffing on side of wheel	2. Perform buffing only on face of wheel
	3. Motor not turning freely (without power)	3. Clean around wheels and shaft and/or replace bearings
Fuses are being blown or circuit breakers are being tripped	1. Overloading due to binding	1. Clean around wheels and shaft and/or replace bearings
	2. Defective plug	2. Replace plug
	3. Defective cord	3. Replace cord
	4. Defective switch	4. Replace switch
	5. Faulty internal wiring	5. Contact authorized Dayton Service Center
Buffer will not operate in variable speed mode	1. Defective variable speed switch	1. Replace switch
	2. Defective sensor	2. Replace sensor
	3. Defective circuit board	3. Replace circuit board

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LIMITED WARRANTY

DAYTON ONE-YEAR LIMITED WARRANTY. Dayton® Buffers, Models covered in this manual, are warranted by Dayton Electric Mfg. Co. (Dayton) to the original user against defects in workmanship or materials under normal use for one year after date of purchase. Any part which is determined to be defective in material or workmanship and returned to an authorized service location, as Dayton designates, shipping costs prepaid, will be, as the exclusive remedy, repaired or replaced at Dayton's option. For limited warranty claim procedures, see PROMPT DISPOSITION below. This limited warranty gives purchasers specific legal rights which vary from jurisdiction to jurisdiction.

LIMITATION OF LIABILITY. To the extent allowable under applicable law, Dayton's liability for consequential and incidental damages is expressly disclaimed. Dayton's liability in all events is limited to and shall not exceed the purchase price paid.

WARRANTY DISCLAIMER. Dayton has made a diligent effort to provide product information and illustrate the products in this literature accurately; however, such information and illustrations are for the sole purpose of identification, and do not express or imply a warranty that the products are MERCHANTABLE, or FIT FOR A PARTICULAR PURPOSE, or that the products will necessarily conform to the illustrations or descriptions. Except as provided below, no warranty or affirmation of fact, expressed or implied, other than as stated in the "LIMITED WARRANTY" above is made or authorized by Dayton.

PRODUCT SUITABILITY. Many jurisdictions have codes and regulations governing sales, construction, installation, and/or use of products for certain purposes, which may vary from those in neighboring areas. While Dayton attempts to assure that its products comply with such codes, it cannot guarantee compliance, and cannot be responsible for how the product is installed or used. Before purchase and use of a product, review the product applications, and all applicable national and local codes and regulations, and be sure that the product, installation, and use will comply with them.

Certain aspects of disclaimers are not applicable to consumer products; e.g., (a) some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you; (b) also, some jurisdictions do not allow a limitation on how long an implied warranty lasts, consequentially the above limitation may not apply to you; and (c) by law, during the period of this Limited Warranty, any implied warranties of implied merchantability or fitness for a particular purpose applicable to consumer products purchased by consumers, may not be excluded or otherwise disclaimed.

PROMPT DISPOSITION. Dayton will make a good faith effort for prompt correction or other adjustment with respect to any product which proves to be defective within limited warranty. For any product believed to be defective within limited warranty, first write or call dealer from whom the product was purchased. Dealer will give additional directions. If unable to resolve satisfactorily, write to Dayton at address below, giving dealer's name, address, date, and number of dealer's invoice, and describing the nature of the defect. Title and risk of loss pass to buyer on delivery to common carrier. If product was damaged in transit to you, file claim with carrier.

Manufactured for Dayton Electric Mfg. Co., 5959 W. Howard St., Niles, Illinois 60714 U.S.A.