

# “Slack Action” Versatility Grinder

Tool Manual – Safety, Operation and Maintenance

SAVE THIS DOCUMENT, EDUCATE ALL PERSONNEL

## 1 hp Variable Speed Models:

64860 (115v) 1 Phase 50/60 Hz  
64861 (230v) 1 Phase 50/60 Hz

## 3hp Variable Speed Models:

64862 (230v) 3 Phase 50/60 Hz  
64863 (460v) 3 Phase 50/60 Hz









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## ⚠ WARNING

Read and understand this tool manual before operating your tool. Follow all safety rules for the protection of operating personnel as well as adjacent areas. For safety information, refer to Safety Requirements for the Use, Care and Protection of Abrasive Wheels – ANSI B7.1, Code of Federal Regulation – CFR 29 Part 1910, European Committee for Standards (EN) Hand Held Electric Motor Operated Tools – Safety Requirements and applicable State and Local Regulations.

## SAFETY LEGEND

|   |   |   |   |
|---|---|---|---|
|  | <b>⚠ WARNING</b><br>Read and understand tool manual before work starts to reduce risk of injury to operator, visitors, and tool.                      | <b>⚠ WARNING</b><br>Practice safety requirements. Work alert, have proper attire, and do not operate tools under the influence of alcohol or drugs.                     |  |
|  | <b>⚠ WARNING</b><br>Eye protection must be worn at all times, eye protection to conform to ANSI Z87.1.  | <b>⚠ WARNING</b><br>Ear protection to be worn when exposure to sound, exceeds the limits of applicable Federal, State or local statutes, ordinances and/or regulations. |  |
|  | <b>⚠ WARNING</b><br>Respiratory protection to be used when exposed to contaminants that exceed the applicable threshold limit values required by law. | <b>⚠ WARNING</b><br>Electric shock hazard. Avoid bodily contact with grounded objects, bodies of water. Do not damage cord set.   |  |

### ⚠ WARNING

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

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

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

### GENERAL SAFETY INSTRUCTIONS

Carefully Read and save all instructions before operating or servicing any Dynabrade® Abrasive Power Tool.

Products offered by Dynabrade are not to be modified, converted or otherwise alerted from the original design without expressed written consent from Dynabrade, Inc.

**Warning:** When using electric tools, basic safety precautions should always be followed to reduce the risk of a fire, electric shock, and personal injury, including the following:

1. **Keep work area clean.** Cluttered areas and benches invite accidents.
2. **Consider work area environment.** Do not expose tools to rain. Keep work area well lit. Do not use power tools in damp or wet locations. Do not use tools in the presence of flammable liquids or gases.
3. **Guard against electric shock.** Be certain machine is adequately grounded before operating.

(continued on next page)

4. **Keep children away.** Do not let visitors contact tool. All visitors should be kept away from work area.
5. **Do not force tool.** It will do a better and safer job at its intended rate.
6. **Use the right tool.** Do not force a small tool or attachment to do the job of a heavy duty tool. Do not use tool for purposes not intended.
7. **Dress properly.** Do not wear loose fitting clothing or jewelry. Clothes can be caught in moving parts. Wear protective hair covering to contain long hair.
8. **Use safety glasses.** Also use face-shield or dust mask if operation area is dusty.
9. **Do not abuse cord.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil and sharp edges.
10. **Do not overreach.** Keep proper footing and balance at all times.
11. **Maintain tools with care.** Keep tools clean for better use and safer performance. Follow instructions for changing accessories. Inspect tool cords periodically and if damaged, have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean and free from oil and grease.
12. **Do not leave tool running.** Disconnect tools when not in use, before servicing, when changing belts, contact arms, etc.
13. **Remove keys and wrenches.** Form a habit of checking to see that all keys and adjusting wrenches are removed from tool before turning it on.
14. **Avoid accidental starting.** Be sure switch is off when plugging in.
15. **Out-door use extension cords.** When tool is used outdoors, use only extension cord suitable for outdoor use. They should be marked with the suffix W-A (for UL) or W (for CSA in Canada).
16. **Stay alert.** Watch what you are doing. Use common sense. Do not operate tool when you are tired.
17. **Check damaged parts.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, breakage of moving parts, binding of moving parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced. Do not use tool if switch does not turn tool on or off.
18. **Avoid gaseous areas.** Do not operate electric tools in gaseous or explosive atmospheres. Motors in these tools normally spark, and the sparks can ignite fumes.
19. **Do not alter or misuse tool.** This tool is precision built. Any alteration or modification not specified is misuse and may result in a dangerous condition. Only these accessories and attachments that are found in this instruction manual are acceptable for use with this tool. The use of any other accessory or attachment might present a risk to the operator.
20. **Replacement parts.** When servicing, use only identical replacement parts. When ordering replacement parts, please specify model and serial numbers of your machine.
21. **Do not operate tool without guards.** Always replace guards after changing contact arm or abrasive belt.
22. **Do not mix grind material.** There is a potential combustion hazard if ferrous and non-ferrous grinding dust is mixed. Clean inside machine between materials.
23. **Use hearing protection.** Permanent hearing loss can result from high process noise levels.
24. **Use correct width abrasive belt.** Using abrasive belt that is narrower than the contact wheel can cause snagging of the workpiece.
25. **Mount tool securely.** Always fasten tool to bench or other support structure to prevent tipping.

#### **Voltage Warning**

Before connecting the tool to a power source (receptacle, outlet, etc.), be sure the voltage supplied is the same as what is specified on the nameplate of the tool. A power source with greater than that specified for tool can result in **serious injury** to the user as well as damage to the tool. Using a power source with voltage less than the nameplate rating is harmful to the tool's motor. If in doubt, **do not plug in the tool.**

**Polarized Plugs:** To reduce the risk of electric shock, this equipment has a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

**Warning:** Keep extension away from the immediate working area.

## ***Maintenance Instructions***

The grinder described in this manual has been designed to be maintenance-free. All bearing and moving parts are sealed and lubricated for life. Electric motor maintenance should be performed as recommended by the motor manufacturer.

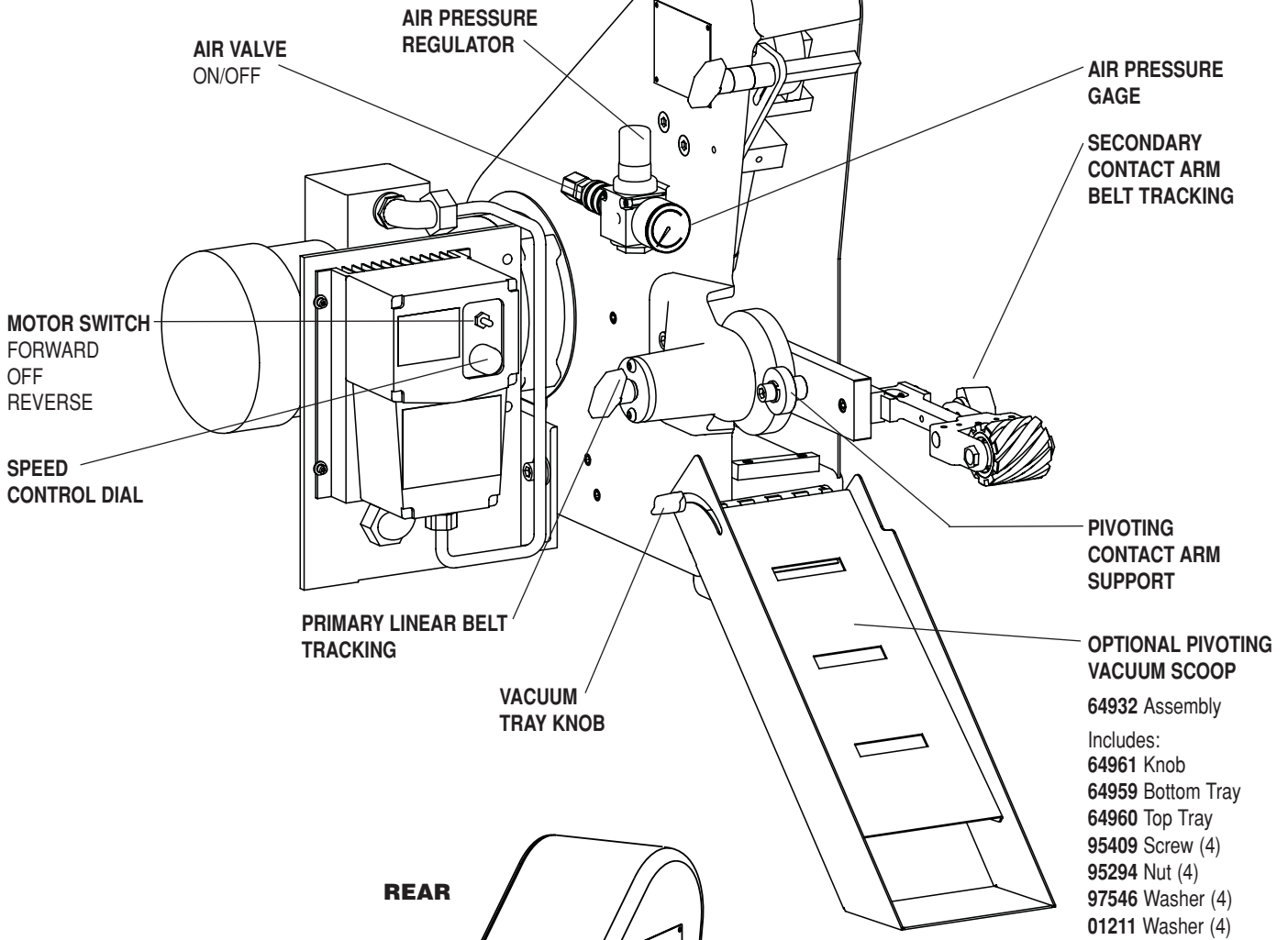
Good housekeeping is essential to insuring long life of any machine tool. By keeping the machine clean and visually inspected for any wear, the machine will provide many years of service.

Before each use inspect the contact wheels, idler rolls and drive pulley for any signs of wear. Repairing or replacing worn parts early enough will prevent other parts from becoming damaged.

**For Models:**  
**64860, 64861**  
**64862, 64863**

## Versatility Grinder Controls/Features

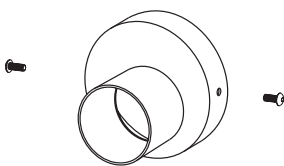
**FRONT**



**REAR**

**OPTIONAL ADAPTER**  
**64923 Vacuum Hose Adapter**  
**95354 Screws (2)**  
 Adapter converts 4" outside diameter to 2-1/4" inside diameter to use with a standard 2-1/2" vacuum hose.

**4" VACUUM PORT**  
 (Outside Dia.)



**Always fasten tool to bench or other support to prevent tipping.**

**BENCH MOUNT BRACKET**  
 (2) 13/32" Thru Holes, 3" Spacing

**For Models:**

64860, 64861

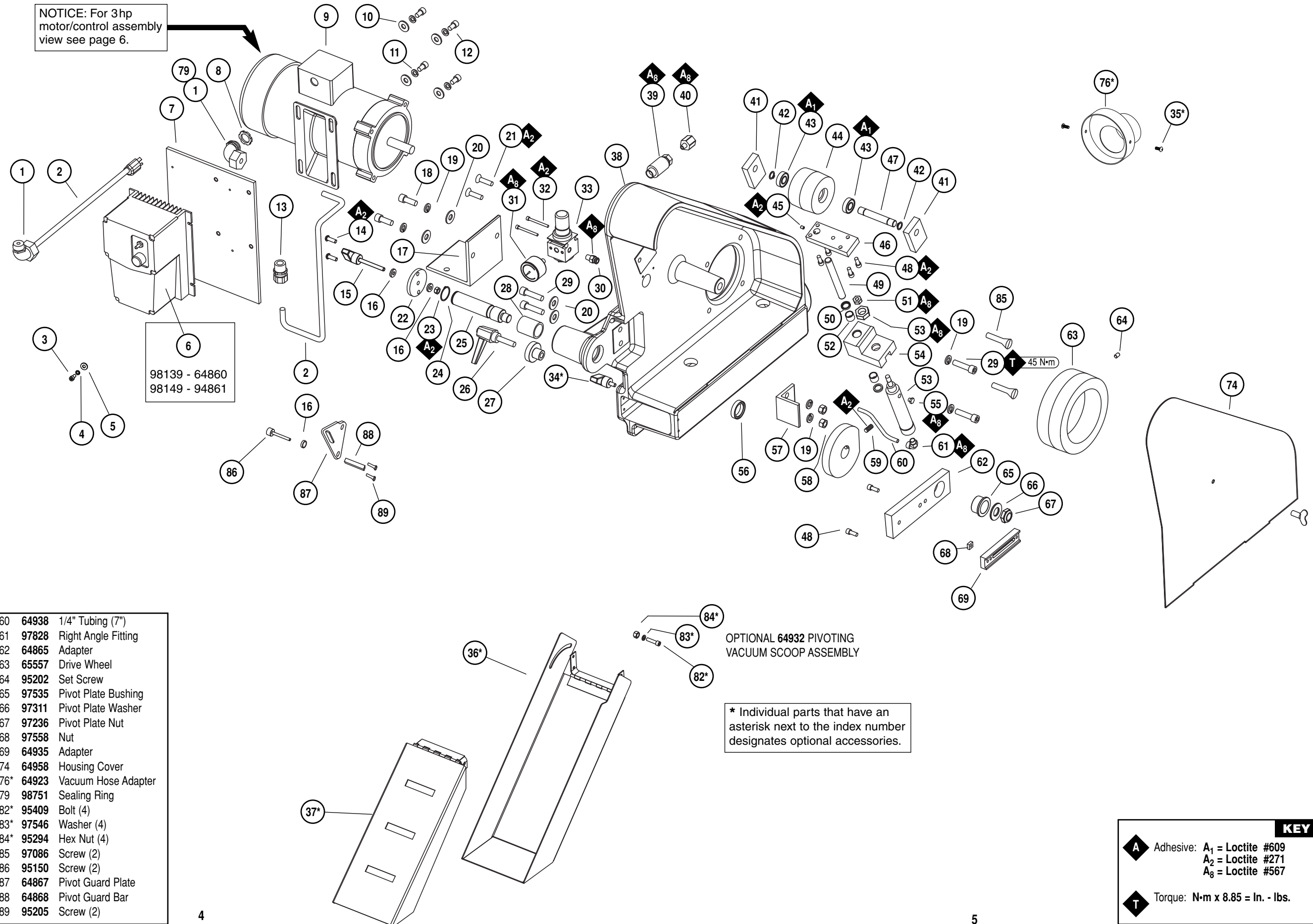
64862, 64863

# Versatility Grinder Complete Assembly

**Index Key**

| No. | Part #  | Description             |
|-----|---------|-------------------------|
| 1   | 98709   | 90° Elbow (2)           |
| 2   | 98418   | Cord                    |
| 3   | 95178   | Screw (4)               |
| 4   | 01211   | Lock Washer (4)         |
| 5   | 97546   | Washer (4)              |
| 6   | Chart   | Variable Speed Control  |
| 7   | 64942   | Support Plate           |
| 8   | 98746   | Lock Nut                |
| 9   | 98020   | Electric Motor - 64900  |
|     | 98022   | Electric Motor - 64901  |
| 10  | 95183   | Washer (4)              |
| 11  | 95042   | Lock Washer             |
| 12  | 95492   | Screw (4)               |
| 13  | 98788   | Cord Grip               |
| 14  | 97553   | Bolt (2)                |
| 15  | 95314   | Tracking Knob           |
| 16  | 95417   | Washer (3)              |
| 17  | 64934   | Bench Mount Bracket     |
| 18  | 95476   | Screw (2)               |
| 19  | 95044   | Lock Washer (8)         |
| 20  | 95043   | Washer (4)              |
| 21  | 97545   | Screws (2)              |
| 22  | 64957   | Tracking Knob Support   |
| 23  | 95186   | Hex Nut                 |
| 24  | 97441   | Snap Ring               |
| 25  | 64954   | Tracking Shaft          |
| 26  | 97741   | Locking Knob            |
| 27  | 64952   | Locking Hub             |
| 28  | 64956   | Bronze Bushing          |
| 29  | 97034   | Screw (6)               |
| 30  | 64936   | Restricted Fitting      |
| 31  | 95696   | Pressure Gauge          |
| 32  | 97026   | Screw (2)               |
| 33  | 97894-C | Regulator               |
| 34* | 64961   | Vacuum Tray Knob        |
| 35  | 95354   | Bolts (2)               |
| 36* | 64959   | Bottom Vac Tray         |
| 37* | 64960   | Top Vac Tray            |
| 38  | 64940   | Housing                 |
| 39  | 64933   | Slide Valve             |
| 40  | 64937   | Air Inlet               |
| 41  | 64948   | Idler Shaft Support (2) |
| 42  | 95697   | Snap Ring (2)           |
| 43  | 11813   | Bearing (2)             |
| 44  | 64950   | Idler Wheel             |
| 45  | 95016   | Set Screw               |
| 46  | 64944   | Idler Wheel Base        |
| 47  | 64949   | Idler Wheel Shaft       |
| 48  | 95536   | Screw (8)               |
| 49  | 64946   | Guide Rod               |
| 50  | 97812   | Rod Seal (2)            |
| 51  | 95334   | Hex Nut                 |
| 52  | 65217   | Guide Rod Bushing (2)   |
| 53  | 64947   | Air Cylinder & Nut      |
| 54  | 64943   | Idler Cylinder Mount    |
| 55  | 97889   | Breather Vent           |
| 56  | 97816   | Seal                    |
| 57  | 64955   | Angular Stop Plate      |
| 58  | 97217   | Hex Nut (2)             |
| 59  | 95624   | Set Screw               |
| 60  | 64938   | 1/4" Tubing (7")        |
| 61  | 97828   | Right Angle Fitting     |
| 62  | 64865   | Adapter                 |
| 63  | 65557   | Drive Wheel             |
| 64  | 95202   | Set Screw               |
| 65  | 97535   | Pivot Plate Bushing     |
| 66  | 97311   | Pivot Plate Washer      |
| 67  | 97236   | Pivot Plate Nut         |
| 68  | 97558   | Nut                     |
| 69  | 64935   | Adapter                 |
| 74  | 64958   | Housing Cover           |
| 76* | 64923   | Vacuum Hose Adapter     |
| 79  | 98751   | Sealing Ring            |
| 82* | 95409   | Bolt (4)                |
| 83* | 97546   | Washer (4)              |
| 84* | 95294   | Hex Nut (4)             |
| 85  | 97086   | Screw (2)               |
| 86  | 95150   | Screw (2)               |
| 87  | 64867   | Pivot Guard Plate       |
| 88  | 64868   | Pivot Guard Bar         |
| 89  | 95205   | Screw (2)               |

NOTICE: For 3hp motor/control assembly view see page 6.



98139 - 64860  
98149 - 94861

OPTIONAL 64932 PIVOTING VACUUM SCOOP ASSEMBLY

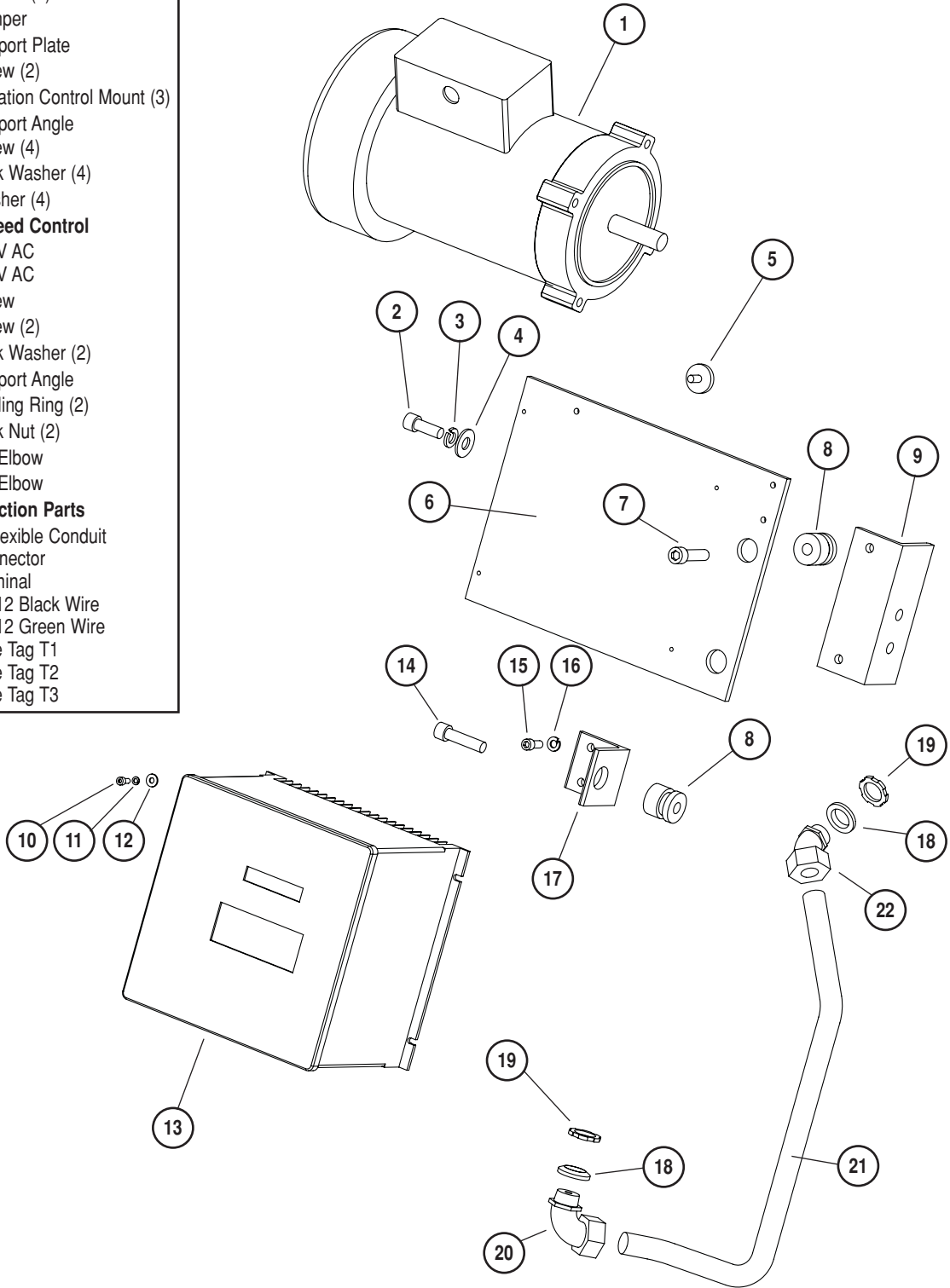
\* Individual parts that have an asterisk next to the index number designates optional accessories.

| KEY      |   |
|----------|---|
| <b>A</b> | Adhesive: A <sub>1</sub> = Loctite #609<br>A <sub>2</sub> = Loctite #271<br>A <sub>8</sub> = Loctite #567 |
| <b>T</b> | Torque: N·m x 8.85 = In. - lbs.   |

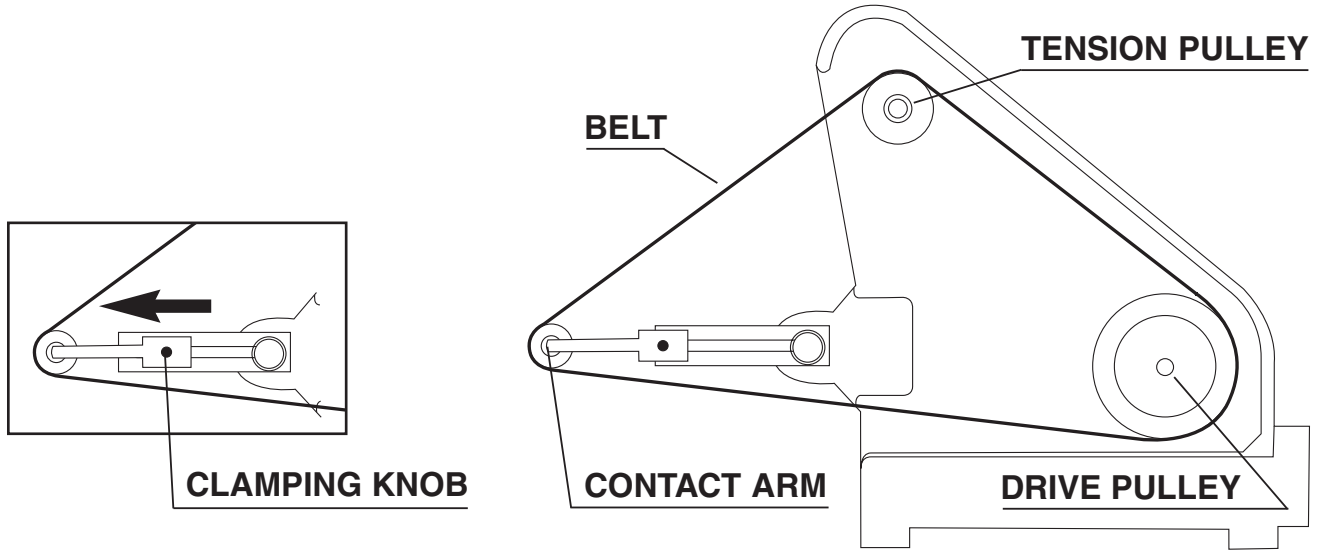
# 3hp Motor/Control Assembly

## Index Key

| No. | Part #                        | Description                 |
|-----|-------------------------------|-----------------------------|
| 1   | 98136                         | 3hp Motor                   |
| 2   | 95476                         | Screw (2)                   |
| 3   | 97546                         | Lock Washer (2)             |
| 4   | 95043                         | Washer (2)                  |
| 5   | 64920                         | Bumper                      |
| 6   | 64926                         | Support Plate               |
| 7   | 97034                         | Screw (2)                   |
| 8   | 64925                         | Vibration Control Mount (3) |
| 9   | 64927                         | Support Angle               |
| 10  | 95178                         | Screw (4)                   |
| 11  | 01211                         | Lock Washer (4)             |
| 12  | 97546                         | Washer (4)                  |
| 13  | <b>Variable Speed Control</b> |                             |
|     | 98137                         | 460V AC                     |
|     | 98138                         | 230V AC                     |
| 14  | 97034                         | Screw                       |
| 15  | 95536                         | Screw (2)                   |
| 16  | 95167                         | Lock Washer (2)             |
| 17  | 64924                         | Support Angle               |
| 18  | 98751                         | Sealing Ring (2)            |
| 19  | 98746                         | Lock Nut (2)                |
| 20  | 98735                         | 90° Elbow                   |
| 21  | 98730                         | 45° Elbow                   |
| 22  | <b>Wire Connection Parts</b>  |                             |
|     | 98403                         | 2' Flexible Conduit         |
|     | 98616                         | Connector                   |
|     | 98612                         | Terminal                    |
|     | 98409                         | 9' #12 Black Wire           |
|     | 98411                         | 3' #12 Green Wire           |
|     | 98434                         | Wire Tag T1                 |
|     | 98435                         | Wire Tag T2                 |
|     | 98436                         | Wire Tag T3                 |



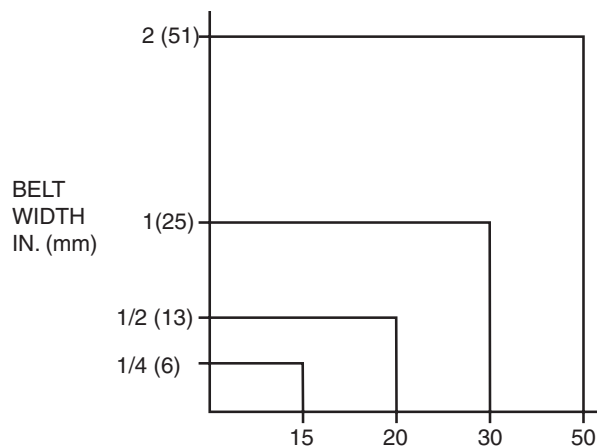
## Abrasive Belt Installation



### Abrasive Belt Installation Instructions

1. Turn speed control dial to "0" and motor switch to "off".
2. Push air valve towards back of machine to retract tension pulley.
3. Remove housing cover.
4. Slide abrasive belt into position shown above in abrasive belt installation diagram, centering belt on pulleys and contact arm. If necessary, loosen clamping knob, and slide contact arm back to allow easier belt positioning. After belt is in place slide contact arm forward to take up belt slack.
5. Replace housing cover.
6. Pull air valve toward front of machine to actuate tension pulley.
7. Adjust air pressure regulator for belt width (clockwise rotation increases pressure) according to Abrasive Belt Tension Diagram below.
8. Turn motor switch to forward or reverse.
9. Adjust belt tracking.
10. Adjust speed control dial to desired belt speed.

### Abrasive Belt Tension Diagram



## One Year Warranty

Following the reasonable assumption that any inherent defect which might prevail in a product will become apparent to the user within one year from the date of purchase, all equipment of our manufacture is warranted against defects in workmanship and materials under normal use and service. We shall repair or replace at our factory, any equipment or part thereof which shall, within one year after delivery to the original purchaser, indicate upon our examination to have been defective. Our obligation is contingent upon proper use of Dynabrade tools in accordance with factory recommendations, instructions and safety practices. It shall not apply to equipment which has been subject to misuse, negligence, accident or tampering in any way so as to affect its normal performance. Normally wearable parts such as bearings, contact wheels, rotor blades, etc., are not covered under this warranty.

## Notice

All Dynabrade tools use the highest quality parts and metals available and are machined to exacting tolerances. Our warranty obligation is contingent upon proper use of our tools and cannot apply to equipment which has been subjected to misuse or a lack of maintenance during the use of this tool.

## Machine Specifications

| Model Number | hp (W)   | Electrical Specifications | SFPM (SMPM)          | Weight Pound (kg) | Width Inch (mm) | Length Inch (mm) | Height Inch (mm) |
|--------------|----------|---------------------------|----------------------|-------------------|-----------------|------------------|------------------|
| 64860        | 1 (744)  | 115V 1ph 50/60            | 600-4000 (183-1219)  | 120 (55)          | 17 (432)        | 33 (838)         | 22 (559)         |
| 64861        | 1 (744)  | 230V 1ph 50/60            | 600-4000 (183-1219)  | 120 (55)          | 17 (432)        | 33 (838)         | 22 (559)         |
| 64862        | 3 (2232) | 230V 3ph 50/60            | 2000-8000 (510-2440) | 120 (55)          | 17 (432)        | 33 (838)         | 22 (559)         |
| 64863        | 3 (2232) | 460V 3ph 50/60            | 2000-8000 (510-2440) | 120 (55)          | 17 (432)        | 33 (838)         | 22 (559)         |

## Abrasive Belts

| Grit              | Material         | 1/4" x 72"<br>(6mm x 1,830mm) | 1/2" x 72"<br>(13mm x 1,830mm) | 1" x 72"<br>(25mm x 1,830mm) | 1-1/2" x 72"<br>(38mm x 1,830mm) | 2" x 72"<br>(51mm x 1,830mm) | 2" x 78"<br>(51mm x 1,981mm) |
|-------------------|------------------|-------------------------------|--------------------------------|------------------------------|----------------------------------|------------------------------|------------------------------|
| <b>40</b>         | Alumina Zirconia | 84807                         | 84808                          | 84809                        | 84810                            | 84811                        | *84812                       |
| <b>60</b>         | Alumina Zirconia | 84771                         | 84772                          | 84773                        | 84774                            | 84775                        | *84776                       |
| <b>80</b>         | Alumina Zirconia | 84777                         | 84778                          | 84779                        | 84780                            | 84781                        | 84782                        |
| <b>120</b>        | Alumina Zirconia | 84789                         | 84790                          | 84791                        | 84792                            | 84793                        | 84794                        |
| <b>180</b>        | Aluminum Oxide   | 84795                         | 84796                          | 84797                        | 84798                            | 84799                        | *84800                       |
| <b>220</b>        | Aluminum Oxide   | 84801                         | 84802                          | 84803                        | 84804                            | 84805                        | *84806                       |
| <b>Super Fine</b> | Non-Woven Nylon  | *83729                        | 83730                          | 83731                        | 83732                            | 83733                        | *83734                       |
| <b>Very Fine</b>  | Non-Woven Nylon  | *83735                        | 83736                          | 83737                        | 83738                            | 83739                        | *83740                       |
| <b>Medium</b>     | Non-Woven Nylon  | N/A                           | 83741                          | 83742                        | 83743                            | 83744                        | *83745                       |
| <b>Coarse</b>     | Non-Woven Nylon  | N/A                           | 83746                          | 83747                        | 83748                            | 83749                        | *83750                       |
| <b>Cloth</b>      | Cloth            | N/A                           | 84841                          | *84842                       | *84843                           | *84844                       | *84845                       |

\*Non-stock item – please allow 2-4 weeks delivery. Minimum order quantities may apply.

## Reference Contact Information

- American National Standards Institute – ANSI**  
25 West 43<sup>rd</sup> Street  
Forth Floor  
New York, NY 10036  
Tel: 1 (212) 642-4900  
Fax: 1 (212) 398-0023
- Government Printing Office – GPO**  
Superintendent of Documents  
Attn. New Orders  
P.O. Box 371954  
Pittsburgh, PA 15250-7954  
Tel: 1 (202) 512-1803
- European Committee for Standardization**  
Rue de Stassart 36  
B - 1050 Brussels, Belgium



Visit Our Web Site: [www.dynabrade.com](http://www.dynabrade.com)

Email: [Customer.Service@Dynabrade.com](mailto:Customer.Service@Dynabrade.com)

**DYNABRADE, INC.,** 8989 Sheridan Drive • Clarence, NY 14031-1490 • Phone: (716) 631-0100 • Fax: 716-631-2073 • International Fax: 716-631-2524  
**DYNABRADE EUROPE S.à.r.l.,** Zone Artisanale • L-5485 Wormeldange—Haut, Luxembourg • Telephone: 352 76 84 94 1 • Fax: 352 76 84 95 1

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