Electric Tool Post Grinder

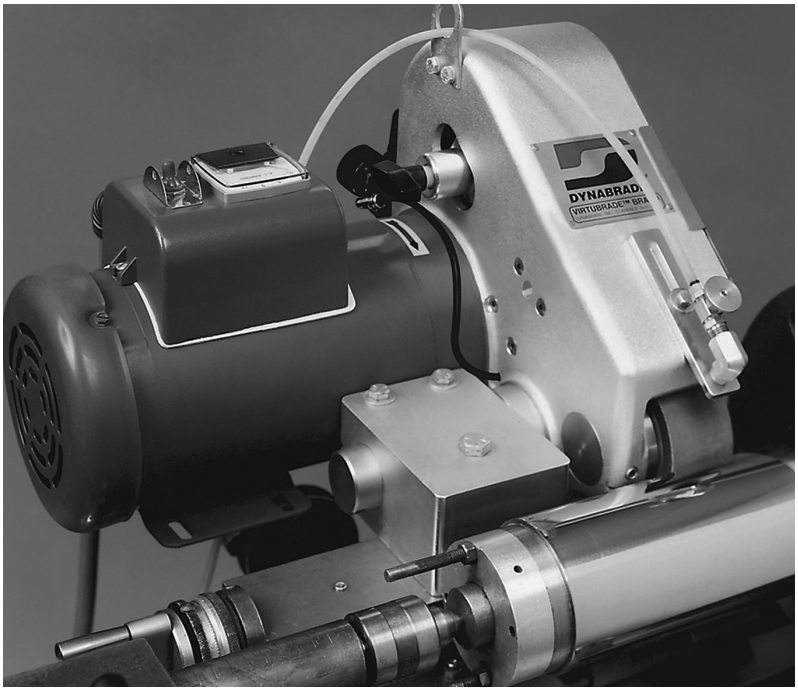
2" x 36" Abrasive Belt Machine

PD14.10
April, 2014

Safety, Operation and Maintenance – Save This Document and Educate All Personnel

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Model	Hz	Abrasive Belt Tension
64991	60	Air-Powered
64993	50	Air-Powered
65014	60	Manual Lever
65016	50	Manual Lever



MACHINE SPECIFICATIONS

Model Number	Abrasive Belt Size	Full Load Amps	Voltage	Phase	Frequency	Abrasive Belt SFPM	Weight	Width	Length	Height
64991	2" W x 36" L	11.5	230	1	60 Hz	4,500	89 lb. (40 kg)	13.5" (343 mm)	16" (406 mm)	17" (432 mm)
64993	2" W x 36" L	9.7	230	1	50 Hz	4,500	89 lb. (40 kg)	13.5" (343 mm)	16" (406 mm)	17" (432 mm)
65014	2" W x 36" L	11.5	230	1	60 Hz	4,500	89 lb. (40 kg)	13.5" (343 mm)	16" (406 mm)	17" (432 mm)
65016	2" W x 36" L	9.7	230	1	50 Hz	4,500	89 lb. (40 kg)	13.5" (343 mm)	16" (406 mm)	17" (432 mm)

Carefully Read all instructions before operating or servicing any Dynabrade® Abrasive Power Tool. Products offered by Dynabrade are not to be modified, converted or otherwise altered from the original design.

DYNABRADE®

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DESCRIPTION

The 2" x 36" Electric Tool Post Grinder is a lathe attachment which uses an abrasive belt driven by an electric motor to grind and polish cylindrical parts. The abrasive belt is either backed by a contact wheel at the point of contact with the rotating cylindrical part or the abrasive belt is supported between two rollers near the point of contact for low pressure grinding and polishing.

INTENDED USE

The 2" x 36" Electric Tool Post Grinder is for industrial use on lathes by trained machinists who have read and understood this manual. Set-up, maintenance and troubleshooting must be done by trained industrial technicians who have read and understood this manual.

FORESEEABLE MISUSE

Set up or troubleshooting by unqualified technicians or without consulting this manual.

Use outdoors.

Use while not attached to a lathe.

Use by untrained or unauthorized operators.

Use with flammable liquids for part cooling.

Use in Class 1 or Class 2 hazardous areas

Neglecting maintenance.

IMPORTANT SAFETY INSTRUCTIONS

READ ALL PARTS OF THIS MANUAL CAREFULLY BEFORE USE

KEEP FOR FUTURE REFERENCE

Definitions

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

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

CAUTION
Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

MACHINE SETUP

WARNING Death or serious injury can occur from crushing if the 2" x 36" Electric Tool Post Grinder tips or falls when lifting from shipping box or pallet. Use lifting hook when removing.

WARNING Death or serious injury can occur from electrocution or arc flash if incorrect connections are made when connecting electric power. Connections must be made by trained industrial technicians or electricians only.

WARNING Death or serious injury can occur from fire if the 2" x 36" Electric Tool Post Grinder is not connected to a rated fuse or circuit breaker. The 2" x 36" Electric Tool Post Grinder does not come with overcurrent protection and must be connected to a rated fuse or circuit breaker.

WARNING Death or serious injury can occur from electrocution if the 2" x 36" Electric Tool Post Grinder is not connected to a rated ground fault protection device. The 2" x 36" Electric Tool Post Grinder does not come with ground fault protection and must be connected to a ground fault protection device.

WARNING Death or serious injury can occur from electrocution if the 2" x 36" Electric Tool Post Grinder is not connected to a rated ground fault protection device. The 2" x 36" Electric Tool Post Grinder does not come with ground fault protection and must be connected to a ground fault protection device.

Continued on next page.

MACHINE SETUP *(CONTINUED)*

WARNING Death or serious injury can occur from electrocution or arc flash if electric cord is damaged. Do not pull cord or use cord to move machine.

CAUTION Injury from crushing or cutting is possible if hands or fingers are caught under the 2" x 36" Electric Tool Post Grinder during installation. Keep hands and fingers clear during installation.

CAUTION Injury from impact is possible from air hose or fitting failure when connecting compressed air lines.

- Do not exceed 90 PSI.
- Fitting must be prevented from rotating when connecting air line. Use wrench on fittings.
- Connections must be made by trained industrial technicians.

ABRASIVE INSTALLATION

CAUTION On models 64993 and 64991 injury from crushing or cutting is possible if hands or fingers are caught under belt and pneumatic cylinder actuates unexpectedly when installing abrasive belt. Disconnect compressed air before installing abrasive belt.

CAUTION Injury from crushing or cutting is possible if hands or fingers are caught under belt when applying tension. Install guards and keep hands and fingers clear during belt tensioning.

CAUTION On models 65014 and 65016 injury from impact is possible if the belt release lever slips when releasing or applying belt tension. Wear gloves and use a firm grip when operating the belt release lever.

CAUTION Injury from straining is possible if abrasive belt tension is not released before removing or installing abrasive belt. Release tension before removing or installing abrasive belt.

MACHINE OPERATION

WARNING Death or serious injury can occur from deflagration if operated in a Class 1 or Class 2 hazardous area. The 2" x 36" Electric Tool Post Grinder is not rated for use in Class 1 or Class 2 hazardous areas and could ignite hazardous gas or dust.

WARNING Death or serious injury can occur from deflagration if ferrous and non-ferrous grinding dust is mixed. Always clean interior and exterior of 2" x 36" Electric Tool Post Grinder between grinding or polishing ferrous and non-ferrous material.

CAUTION Injury from crushing or cutting is possible if the 2" x 36" Electric Tool Post Grinder is used without guards in place. Never use without guards.

CAUTION Injury from impact or crushing is possible if adjustments or abrasive belt changes are made while the lathe is on and the work piece is moving. Always make adjustments and abrasive changes with the lathe turned off.

CAUTION Injury from crushing or cutting is possible if the 2" x 36" Electric Tool Post Grinder starts unexpectedly. Always unplug from electric power and compressed air when not in use.

CAUTION Permanent hearing loss is possible if exposure to sound exceeds the limits of Federal, State or local statutes, ordinances and/or regulations. Wear hearing protection.

CAUTION Eye injury from grinding particles is possible when using abrasive power tools. Eye protection conforming to ANSI Z87.1 must be worn at all times.

MAINTENANCE

CAUTION Injury from crushing or cutting is possible if the 2" x 36" Electric Tool Post Grinder starts unexpectedly. Always unplug from electric power and compressed air when performing maintenance.

CAUTION Injury from slip or fall is possible if floor is wet.

TROUBLESHOOTING

DANGER Death or serious injury will occur from electrocution or arc flash after direct or indirect contact with live parts. Disconnect electric power before accessing controls.

CAUTION Injury from crushing or cutting is possible if the 2 x 36 Electric Tool Post Grinder starts unexpectedly. Always disconnect from electric power and compressed air when troubleshooting.

12 MONTH WARRANTY

Dynabrade warrants all Electric Tool Post Grinders against defects in workmanship and materials under normal use and service for a period of 12 months from the date of purchase as set forth herein. Customer must return the defective tool to Dynabrade within 12 months from the date of purchase. Upon examination and review at Dynabrade's factory, Dynabrade shall confirm whether the tool qualifies for warranty status, in which case Dynabrade shall repair or replace the tool at no charge to the customer. Exceptions for in-field examination shall be made only at Dynabrade's discretion.This warranty is contingent upon proper use of the Electric Tool Post Grinders in accordance with factory recommendations, instructions and safety practices. It shall not apply to equipment that has been subjected to misuse, negligence, accident or tampering in any way so as to affect its normal performance. This warranty does NOT cover normally wearable parts and accessories, including, but not limited to electrical switches, cords and plugs, handles and latches, contact wheels and bearings. This warranty does NOT cover chipped paint or corrosion.To be considered for warranty, tools must be sent back to our factory, transportation prepaid by customer. Please send tool back to attention "Repair Department" with note fully explaining the nature of the problem along with a copy of original invoice indicating model and serial number. Exceptions for in-field repair shall be made only at Dynabrade's discretion.This warranty applies only to the original tool owner and is non-transferable.

THIS WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND THERE ARE NO OTHER WARRANTIES THAT EXTEND BEYOND THIS EXPRESS WARRANTY.

Dynabrade will not be liable for damages to products, other property or persons due to improper use or through attempts to use products for other than their intended use. DYNABRADE WILL NOT BE LIABLE TO CUSTOMER OR ANY THIRD PARTY FOR ANY SPECIAL, CONTINGENT, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES. Dynabrade's liability with respect to a claim for any other damages arising out of or connected with the manufacture, sale, purchase, non-delivery, use or performance of any product sold by Dynabrade will in no event exceed to the price paid for the product.

INSTRUCTIONS FOR USE

Machine Setup

Step 1 Remove any tooling, tooling holders, etc. from the lathe compound.

Step 2 Clear all chips and debris from the top of compound and "T"-slot.

Step 3 Providing the "T"-nut is of correct size for the lathe compound, lift (or hoist) the entire tool into position. Align and insert "T"-nut into slot.

Step 4 Using your fingers, lightly snug the Hex Screw (**97087**) until the tool becomes parallel to the workpiece centerline.

Step 5 The tool can now be swung from side to side and positioned for the desired angle between the contact wheel and the workpiece. Once this is achieved, firmly tighten Hex Screw (**97087**).

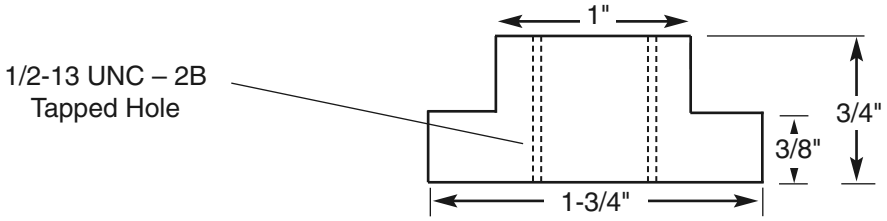
Step 6 Position the contact wheel at or above the workpiece centerline. This will ensure proper belt tracking and prevent chatter from occurring. The position can be altered by loosening the two Cap Screws (**97088**) and allowing the tool to pivot on the Pivot Shaft (**65266**) (tool must be supported while performing this task!) Firmly retighten the screws once proper positioning is achieved.

Step 7 Connect compressed air (Models 64991 &64993).

Step 8 Connect electric power. See page 11.

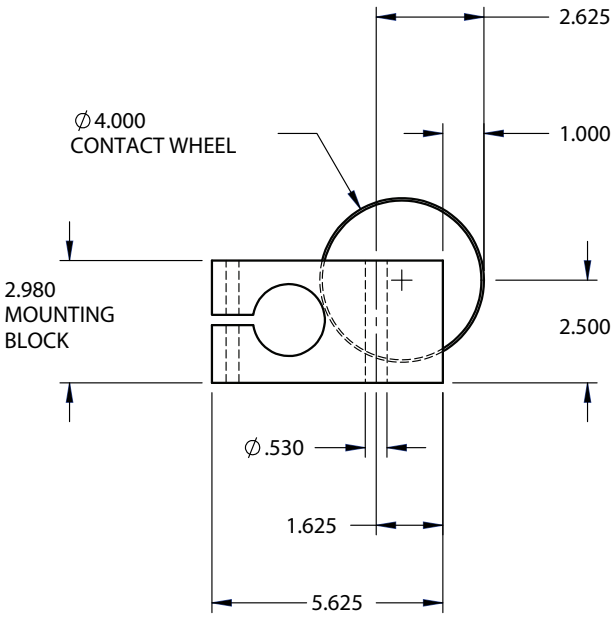
The machine is now ready for operation.

"T"- Nut Dimensions

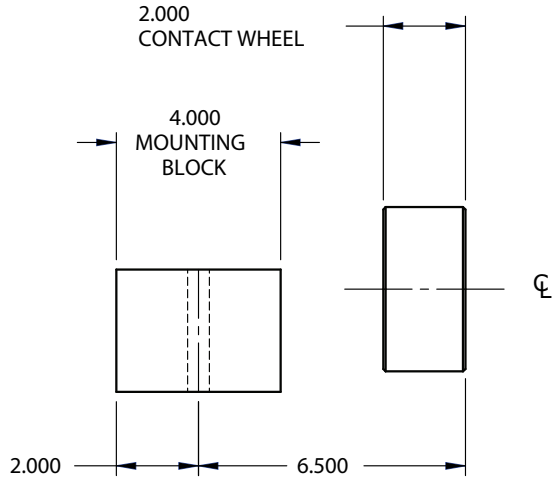


Mat'l 303-SS

SIDE VIEW

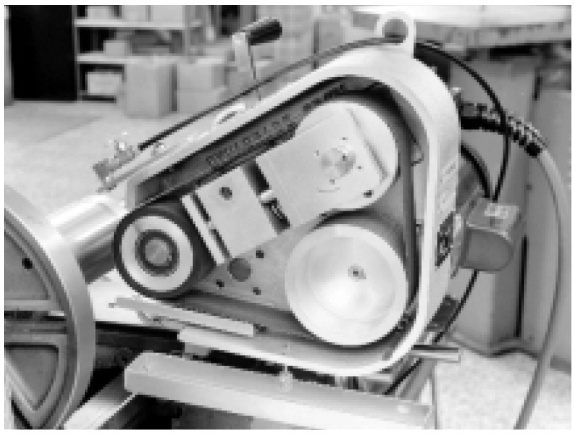


FRONT VIEW



MACHINE OPERATION

Belt Installation/Change



Step 1 Remove Belt Guard by grasping Door Latch (**97760**) and rotate quarter turn counter-clockwise.

Step 2 Pull the belt release lever rearward until distinctive “click” or catch is felt indicating the engagement of cam mechanism into machined groove.

Step 3 **Important:** With firm rearward hold on release lever handle, remove belt with left hand.

Step 4 Install new belt in same manner.

Step 5 With hand and fingers free from moving parts, push release lever forward until belt becomes taught.

Replace belt guard and turn door latch quarter turn clockwise until “click” is heard.

Belt Tracking

Belt tracking is accomplished by turning the Tracking Knob (**95314**). Turning clockwise moves belt to the right. Turning counter-clockwise moves belt to the left.

Coolant Nozzle

The coolant nozzle can be extended or retracted (if dia. allows) for good placement of coolant flow by loosening Hex Screw (**95179**). Retighten once placement is achieved. The coolant nozzle has an adjustable flow valve which connects to 1/4" diameter flexible nylon tubing.

Drip Pan

The drip pan is hinged on a #10 eye screw and can be tilted fore and aft to direct coolant toward lathe bed or to a drain hose. A 1/4 NPT port is provided at each end for this purpose.

Catch Tray Assembly

Each machine comes equipped with an adjustable catch tray which positions underneath the contact wheel. Its purpose is to collect the major portion of grind dust/swarf and direct it away from the lathe ways. It should be placed within 1/8" of workpiece. Position can be changed by loosening Knob (**97773**). When grinding into a shoulder, it will be necessary to remove tray entirely.

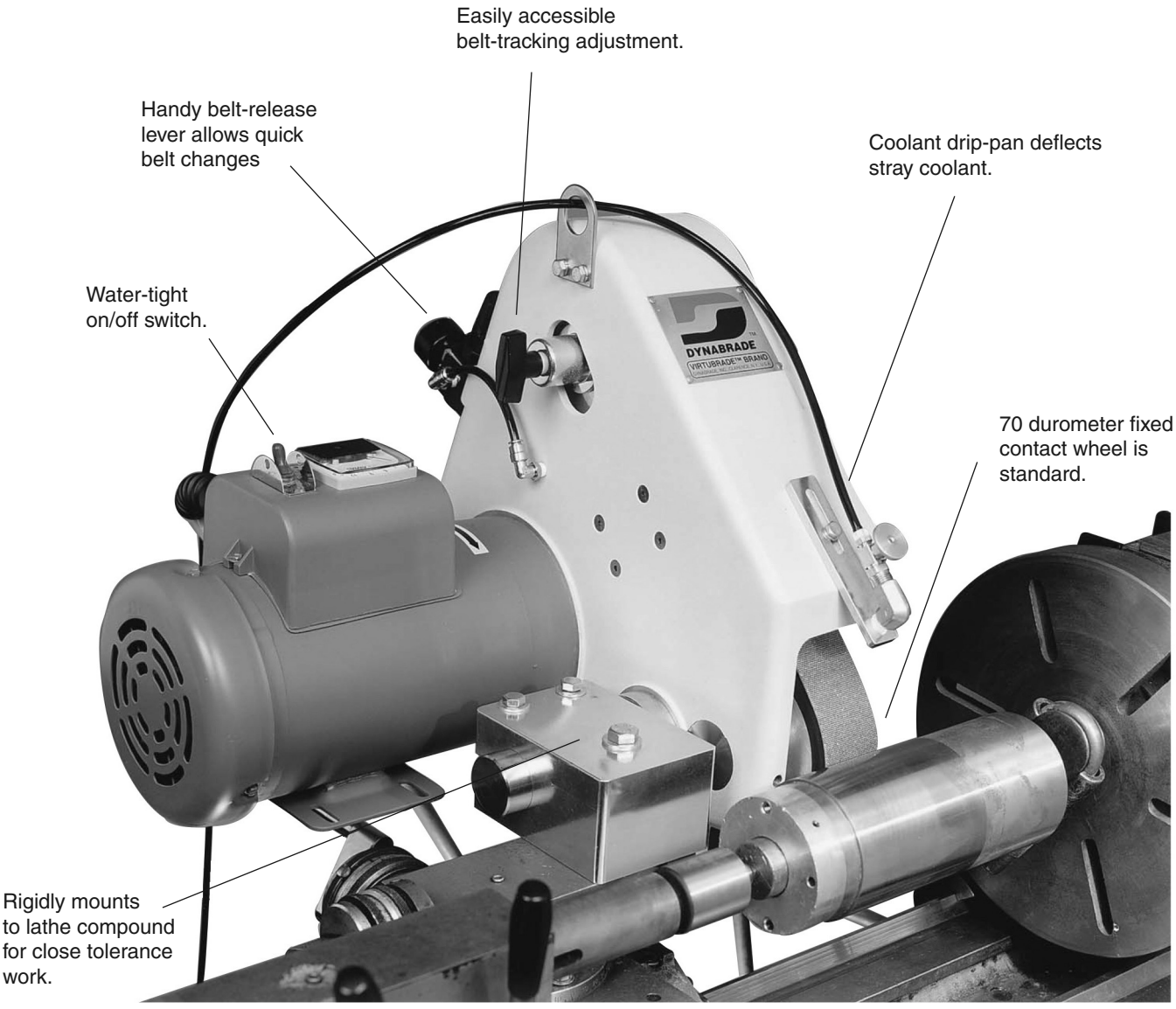
MAINTENANCE

The grinders described in this manual have been designed to be maintenance-free. All bearings 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 quality service.

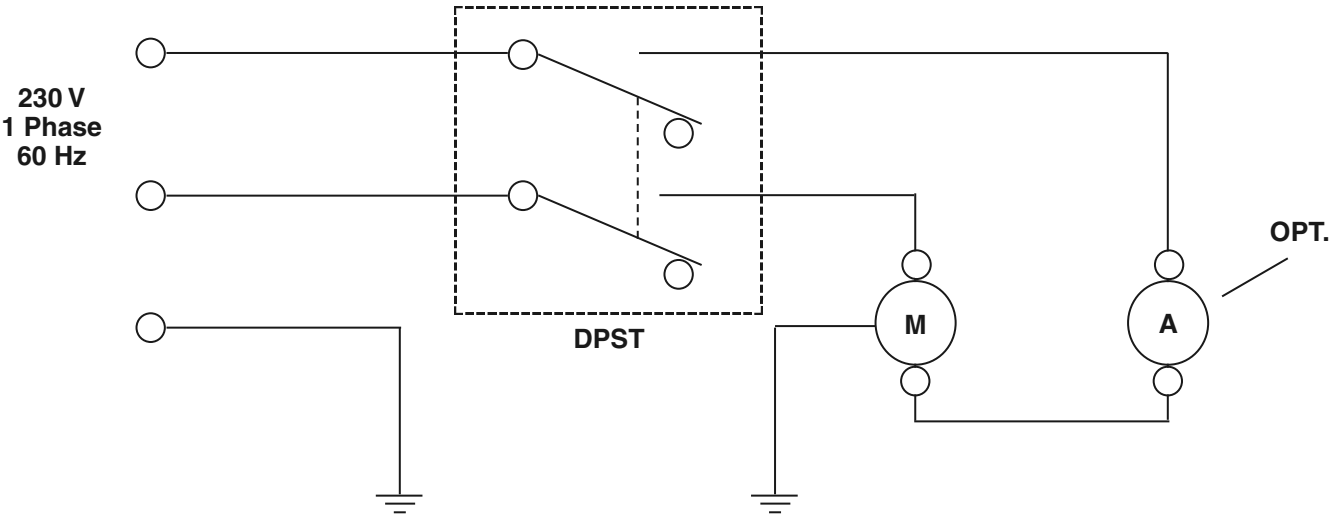
Periodically inspect the contact wheels, idler rolls and drive pulley for any signs of wear. Repairing or replacing worn parts early enough will prevent other parts from becoming damaged.

FEATURES

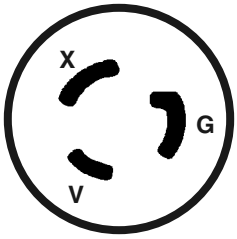

Easily accessible
belt-tracking adjustment.
Handy belt-release
lever allows quick
belt changes
Coolant drip-pan deflects
stray coolant.
Water-tight
on/off switch.
70 durometer fixed
contact wheel is
standard.
Rigidly mounts
to lathe compound
for close tolerance
work.
DYNABRADE
VIRTUBRADE™ BRAND

ELECTRICAL SCHEMATICS

65014 & 64991

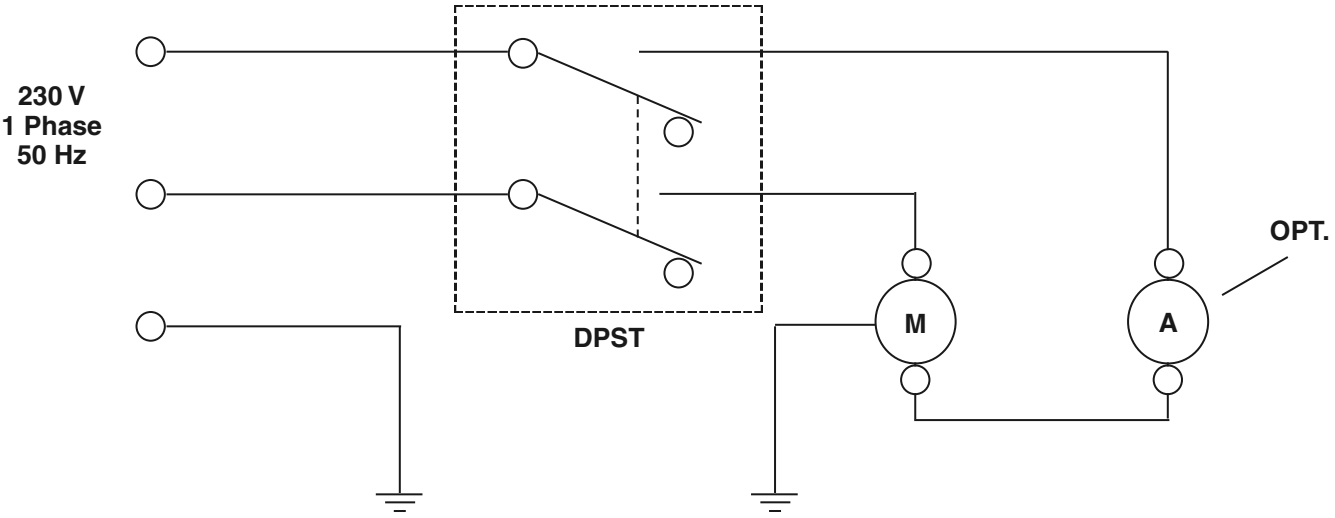


Nema Configuration Locking Type Plug



L6 – 2OP

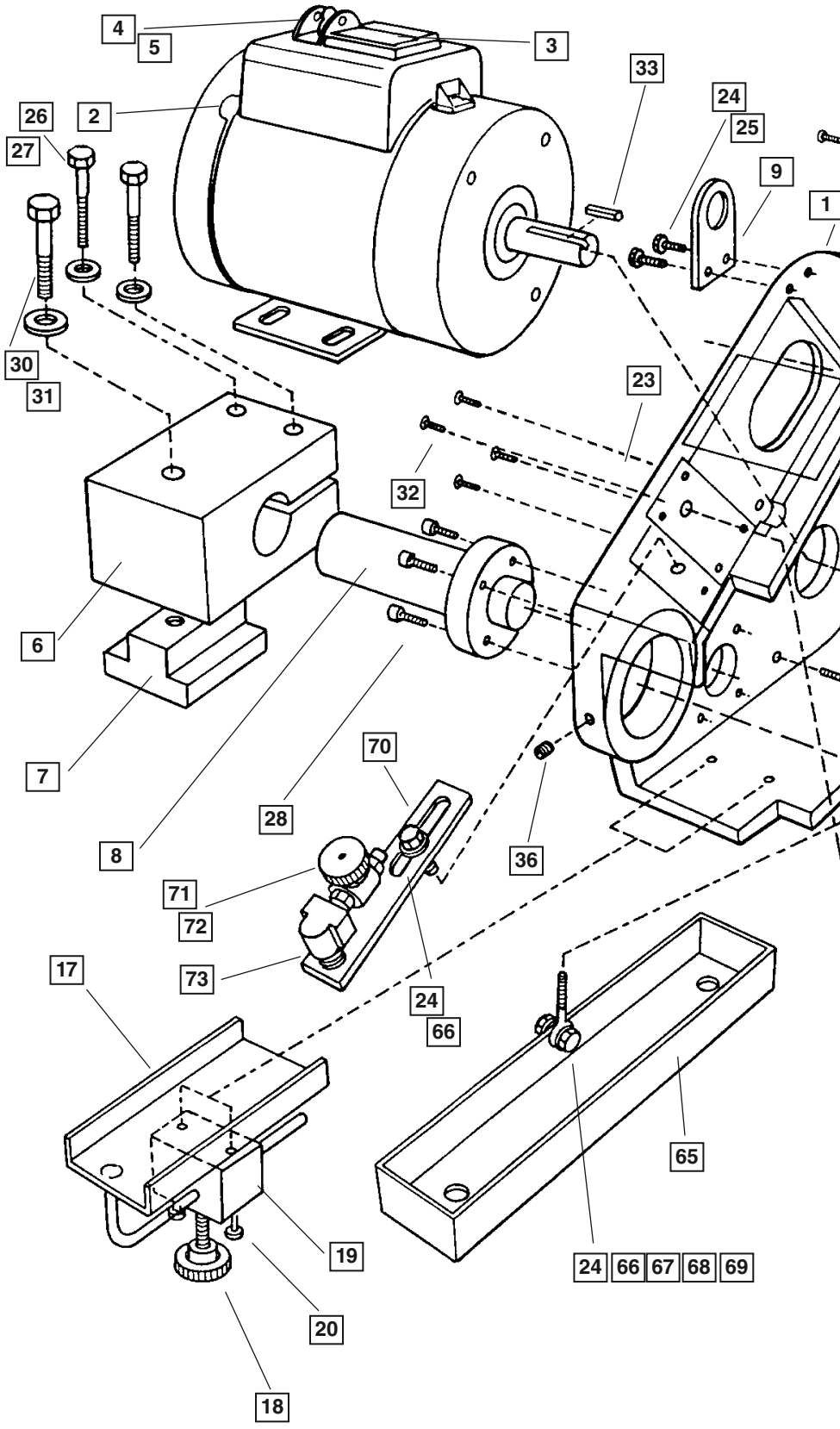
65016 & 64993

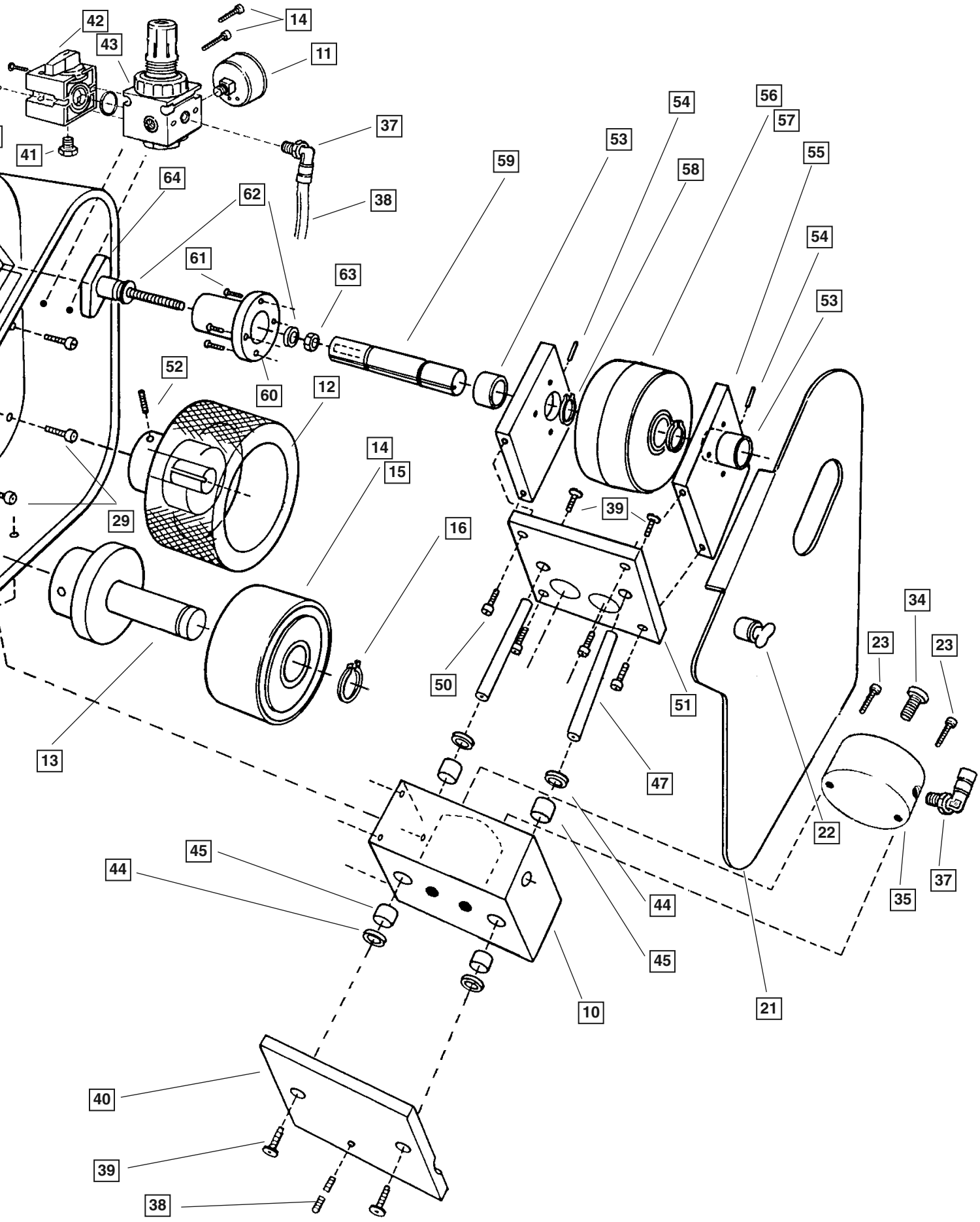


Plug not included

64991 *3,450 RPM, 60Hz*
64993 *2,850 RPM, 50Hz*

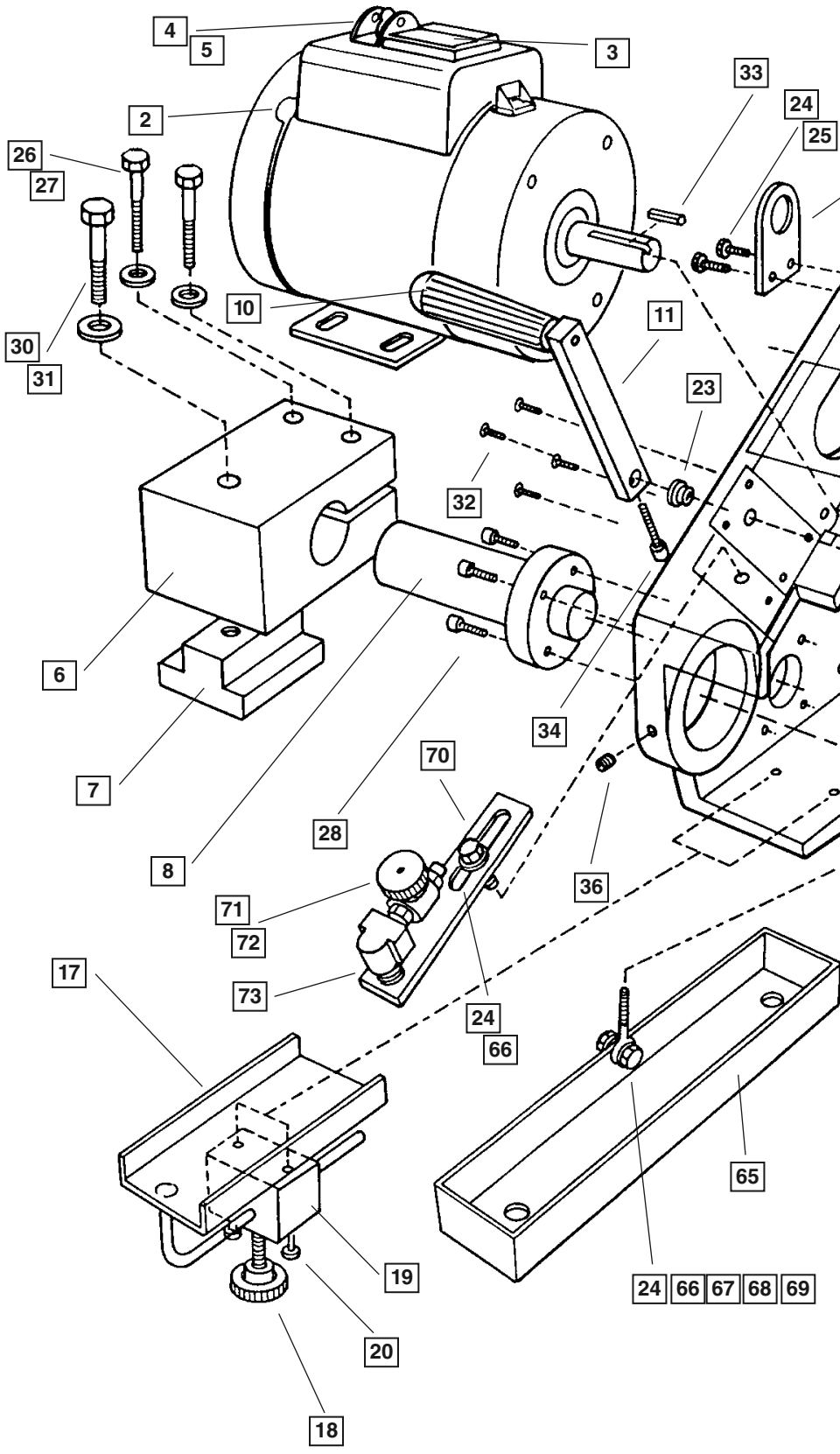
Item	Part No.	Description	Qty.
1	65271	Housing	1
2	65335	Electric Assembly (50 Hz)	1
	65349	Electric Assembly (60 Hz)	1
3	98377	Ammeter	1
4	98369	Switch	1
5	98370	Switch Guard	1
6	65195	Mounting Block	1
7	98493	T-Nut	1
8	65266	Pivot Bar	1
9	14333	Lift Bracket	1
10	66616	Tension Block	1
11	95696	Guage	1
12	65238	Drive Wheel (64991)	1
	65306	Drive Wheel (64993)	1
13	65233	Contact Wheel Shaft	1
14	97026	Screw	1
15	97502	Ball Bearings	2
16	97436	Retaining Ring	1
17	65263	Tray (includes rod)	1
18	97773	Knob	1
19	65314	Tray Support	1
20	97061	Screw	2
21	65268	Vacuum Cover	1
22	97760	Door Latch	1
23	97053	Screw	3
24	95179	Hex Screw	2
25	95167	Lock Washer	2
26	97088	Hex Screw	2
27	95183	Flat Washer	2
28	97057	Cap Screw	4
29	97059	Cap Screw	3
30	97087	Hex Screw	1
31	97310	Flat Washer	1
32	97085	Flathead Screw	4
33	97460	Key	1
34	97069	Carriage Bolt	2
35	97806	Air Cylinder	2
36	97112	Set Screw	1
37	97828	Fitting	2
38	97829	Hose	1
39	97083	Flathead Screw	4
40	65232	Tension Strap	1
41	97883	Breather Vent	1
42	97894-B	Valve	1
43	97898-C	Regulator	1
44	97812	Oil Seal	4
45	65217	Bushing	4
46	65338	Contact Wheel	1
47	65267	Tension Shaft	2
48	97479	Spring	2
49	97731	Shoulder Washer	4
50	97058	Cap Screw	4
51	65269	Tension Support	1
52	95202	Set Screw	1
53	97556	Bushing	2
54	97405	Roll Pin	2
55	65075	Idler Support	2
56	65236	Tracking Wheel (64991)	1
	65307	Tracking Wheel (64993)	1
57	97518	Ball Bearing	2
58	97441	Retaining Ring	2
59	65130	Tracking Shaft	1
60	65132	Tracking Hub	1
61	97152	Low Head Screw	4
62	95417	Nylon Washer	2
63	95186	Hex Nut	1
64	95314	Knob	1
65	65264	Drip Pan	1
66	95166	Flat Washer	1
67	95167	Lock Washer	1
68	95170	Wing Nut	1
69	97151	Eye Screw	1
70	65262	Nozzle Support	1
71	95761	Valve	1
72	95084	Reducer	1
73	96063	Elbow	1

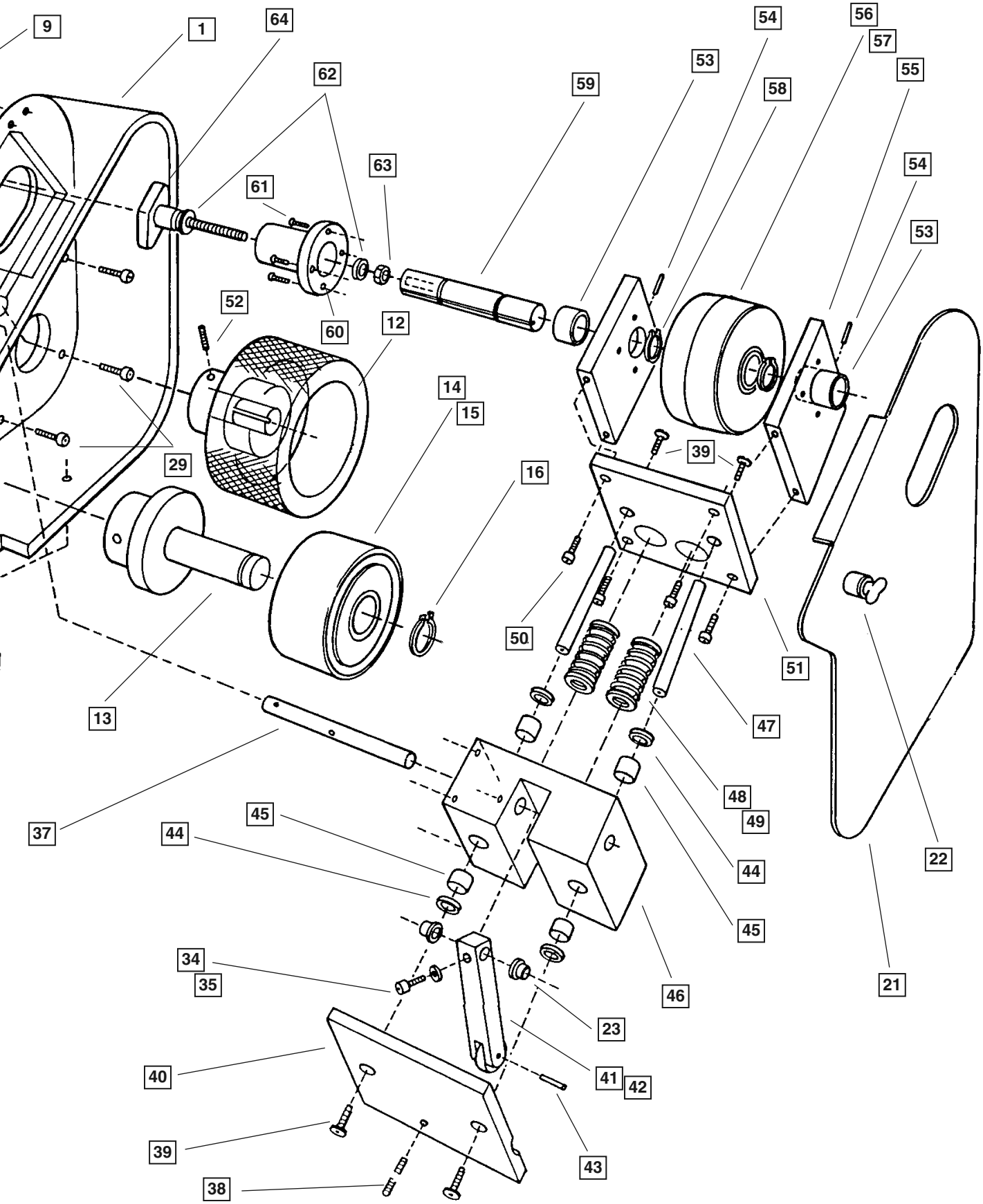



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65014 *3,450 RPM, 60Hz*
65016 *2,850 RPM, 50Hz*

Item	Part No.	Description	Qty.
1	65271	Housing	1
2	65335	Electric Assembly (50 Hz)	1
	65349	Electric Assembly (60 Hz)	1
3	98377	Ammeter	1
4	98369	Switch	1
5	98370	Switch Guard	1
6	65195	Mounting Block	1
7	98493	T-Nut	1
8	65266	Pivot Bar	1
9	14333	Lift Bracket	1
10	11535	Handle	1
11	65219	Release Lever	1
12	65238	Drive Wheel (65014)	1
	65306	Drive Wheel (65016)	1
13	65233	Contact Wheel Shaft	1
14	65237	Contact Wheel	1
15	97502	Ball Bearings	2
16	97436	Retaining Ring	1
17	65263	Tray (includes rod)	1
18	97773	Knob	1
19	65314	Tray Support	1
20	97061	Screw	2
21	65268	Vacuum Cover	1
22	97760	Door Latch	1
23	97530	Flanged Bushing	3
24	95179	Hex Screw	2
25	95167	Lock Washer	2
26	97088	Hex Screw	2
27	95183	Flat Washer	2
28	97057	Cap Screw	4
29	97059	Cap Screw	3
30	97087	Hex Screw	1
31	97310	Flat Washer	1
32	97085	Flathead Screw	4
33	97460	Key	1
34	97011	Cap Screw	2
35	95359	Flat Washer	2
36	97112	Set Screw	1
37	65265	Release Lever Shaft	1
38	97110	Set Screw	2
39	97083	Flathead Screw	4
40	65232	Tension Strap	1
41	65234	Release Cam	1
42	11016	Ball Bearing	1
43	97406	Roll Pin	1
44	97812	Oil Seal	4
45	65217	Bushing	4
46	65235	Tension Block	1
47	65267	Tension Shaft	2
48	97479	Spring	2
49	97731	Shoulder Washer	4
50	97058	Cap Screw	4
51	65269	Tension Support	1
52	95202	Set Screw	1
53	97556	Bushing	2
54	97405	Roll Pin	2
55	65075	Idler Support	2
56	65236	Tracking Wheel (65014)	1
	65307	Tracking Wheel (65016)	1
57	97518	Ball Bearing	2
58	97441	Retaining Ring	2
59	65130	Tracking Shaft	1
60	65132	Tracking Hub	1
61	97152	Low Head Screw	4
62	95417	Nylon Washer	2
63	95186	Hex Nut	1
64	95314	Knob	1
65	65264	Drip Pan	1
66	95166	Flat Washer	1
67	95167	Lock Washer	1
68	95170	Wing Nut	1
69	97151	Eye Screw	1
70	65262	Nozzle Support	1
71	95761	Valve	1
72	95084	Reducer	1
73	96063	Elbow	1




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OPTIONAL ACCESSORIES

CONTACT WHEELS

Part Number	Diameter Inch (mm)	Width Inch (mm)	Face Material
65237	4 (102)	2 (51)	70 Duro Rubber
65338*	4 (102)	2 (51)	90 Duro Rubber
65339	4 (102)	2 (51)	50 Duro Rubber
65340	4 (102)	2 (51)	Steel

*Standard on machine. All include 2 each of 97502 Bearing.

SLACK BELT ATTACHMENT



Part No. 65415

- 2" (51 mm) x 36" (915 mm).
- Specialized contact arm assembly allows slack polishing of workpieces up to 20" (508 mm) diameter.

DYNACUT ABRASIVE BELTS

DynaCut Aluminum Oxide (A/O) Coated Abrasive Belts
The most common mineral for general purpose applications, primarily on softer metals.
For light and heavier grinding, plus blending on aluminum, carbon steel, brass and bronze.

W x L (Inches)	Belt Type	Belt Brand	36 Grit	40 Grit	60 Grit	80 Grit	120 Grit	180 Grit	220 Grit	320 Grit	Package Quantity
2 x 36	A/O	DynaCut	•	•	91637	91638	91639	91640	91641	91642	10

• Call for availability and pricing.

COOLANT FILTRATION SYSTEM

Superfinishing requires very clean coolant. If the coolant is not filtered, the grinding residue will act as an abrasive slurry, which can affect the final finish. Dynabrade's 68000 Coolant Filtration System filters the coolant to 1µ, eliminating this problem.

Model 68000 ***115 Volt, 1 Phase***
Model 68100 ***230 Volt, 1 Phase***
Model 68101 ***230 Volt, 3 Phase***

- 120 Volt System for easy hookup.
- 2-stage filters to prevent 1-micron filter from clogging prematurely.
- 40 gallon tank – removable for cleaning.
- Transparent Tank for viewing coolant level.
- Easy access for changing filters.
- Self-priming Centrifugal Pump.
- GFI protection.



Replacement Filters

Part No. 66631

- 1-micron Disposable Filter Cartridge.

Part No. 66635

- 5-micron Disposable Filter Cartridge.

DYNABRADE, INC. **www.dynabrade.com**
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