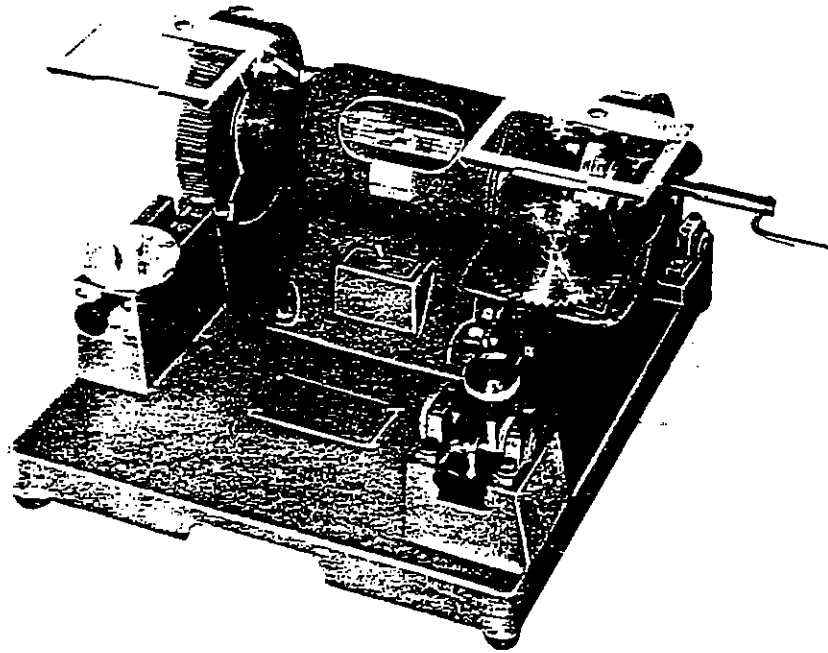


# PARTS AND SERVICE MANUAL

## UNIVERSAL BLADE GRINDER



INSTALLATION  
OPERATING  
MAINTENANCE INSTRUCTIONS  
PARTS LIST



**BEST & DONOVAN**

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# Universal Blade Grinder

## INSTALLATION INSTRUCTIONS

### IMPORTANT

Inspect your Best & Donovan Universal Blade Grinder for possible damage as soon as you receive it. If you discover any damage, notify carrier's agent at once and request him to inspect the damage, also notify Best & Donovan.

### NOTE:

Carefully read the following instructions before attempting to assemble and operate.

## OPERATING INSTRUCTIONS

Maintenance personnel should gather all maintenance and parts list information on the B & D Universal Blade Grinder. They should read and understand all maintenance and servicing instructions then file it where it is easily retrievable.

Preventive maintenance is the first step of good maintenance. A periodic check should be made to replace worn parts. A worn part replaced in time may save extensive repairs later.

THIS IS A PRECISION MACHINE made up of precision parts and should be handled with care. Do not squeeze parts in holding device or otherwise misuse. Too much pressure exerted in holding device may cause distortion of part. Be sure you have the correct tools and fixtures before assembling (or disassembling) this machine.

IT IS IMPORTANT that all parts are thoroughly cleaned and inspected before assembling.

BEFORE DISASSEMBLING a machine, the area around the work bench should be clean and free from metal chips and other foreign matter. It is a good practice to spread a clean cloth on the work bench to prevent the loss of small parts.

The Best & Donovan Universal Grinder is designed to sharpen blades for B & D Air and Electrically Operated Dehidors. It will produce an exact tooth form with a minimum of operator judgment and skill. The grinding wheel is shaped in such a fashion as to grind the entire tooth in one pass.

# PARTS LIST

Item No.	Part Number	Name
1	6380000	B & D UNIVERSAL BLADE GRINDER
2	6380100	Pillow Blocks
3	6380200	1/2 x 3" Dowel Pin
4	6380300	Knurled Nut
5	6380400	Grinder Base
6	6380500	Blade Holder Arm
7	6380600	Blade Holder Hinge
8	6380700	Blade Holder
9	6380800	Grinding Wheel
10	6380900	Thumb Screw
11	6381000	Tipping Fixture
12	9902194	1/2 x 4" Dowel Pin
13	6381200	Wheel Dresser Shaft
14	6381300	Crank Handle
15	6381400	Wheel Dresser Arm
16	6381500	Flexible Wheel
17	6381600	Crush Dresser
18	6381700	48 Tooth Gear
19	6381800	Center Aligning Post
20	6381900	Clicker Support Bracket
21	6382000	Clicker Spring
22	6382100	Adjusting Stud
23	6382200	Stud Locating Block
24	6382300	Knurled Knob
25	6382400	Vertical Adjusting Spring Bracket
26	6382500	Locating Post
27	6382600	Adjusting Post
28	6382700	Spring for Blade Adjustment
29	6382800	Mounting Bracket for Tipping Blade
30	6382900	Tipping Slide & Holder
31	6383000	Adjusting Screw for Tipping
32	6383100	Adjusting Nut on Tipping Fixture
33	6383200	Eye Shield
34	6383300	Electric Motor 110V-1-PH.-50-60 CYC
35	6383400	1/4" ID Washer
36	9901300	1/4"-20 x 1" Allen Cap Screw
37	6383500	Flat Head Screw
38	6383600	3/16 x 3/8 Round Head Screw
39	6383700	8/32 Round Head Screw
40	9901298	1/4"-20 x 3/4" Allen Cap Screw
41	6383800	Pillow Block Top Screw
42	6383900	Guard Plate Screw
43	6384000	5/16 - 18 Hex Bolt
44	6384100	Wheel Flange Washer
45	6384200	Wheel Hex Nut
46	6384300	Wheel Adaptor Bushing
47	6384400	Inside Wheel Spacer
48	6384500	Flex Wheel Support Washer
49	6384600	Base Mounting Leg (Rubber)
50	6384700	Blade Holder Magnets

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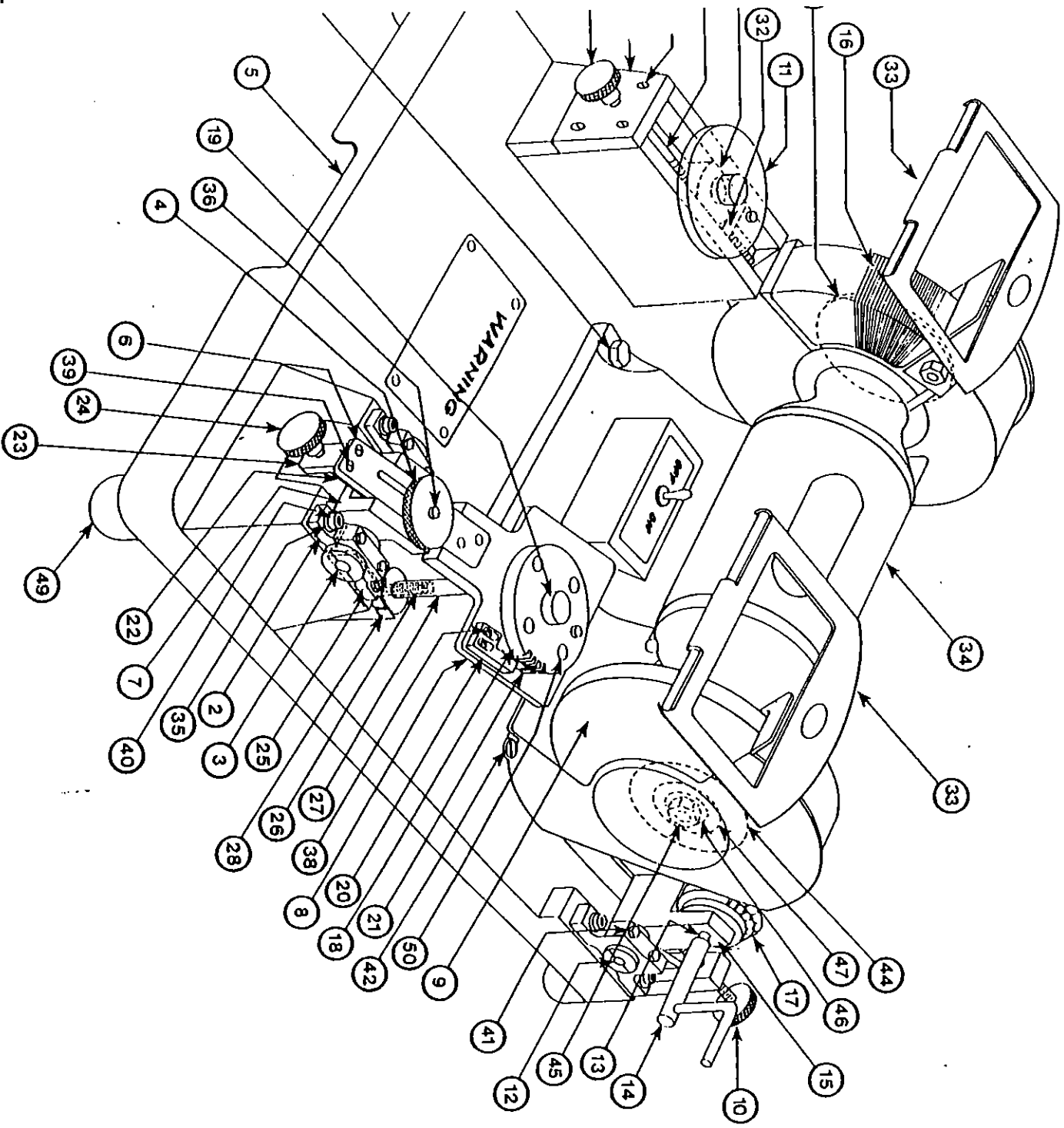
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# PARTS LIST



### DRESSING THE GRINDING WHEEL

To dress out the wheel with the diamond form dresser, shut off machine. Turn the large black knob in back of the machine on its' eccentric cam until high point of the dresser just touches the wheel by turning the clicker wheel on top of the wheel guard.

Turn dresser on eccentric shaft so that it does not touch the wheel. Turn on the machine and by turning the dresser knob and the clicker wheel, dress out the grinding wheel until the wheel has the complete form of the form dresser.

When wheel is dressed, turn dresser so that it does not touch the wheel.

**ELECTRIC GRINDER MUST BE TURNED OFF DURING DRESSING.**

**DO NOT ATTEMPT TO DRESS GRINDER WITH GRINDER MOTOR RUNNING.**

### DRESSING SIDES OF WHEEL

Due to the manufacturing tolerance inherent in producing grinding wheels, the thickness will vary from one wheel to the next. If the grinding wheel is too thick, it will produce a gouge or score at the bottom of the gullet of the tooth or possibly, in extreme cases, on the cutting edge adjacent to the bottom of the gullet. If a groove appears at either of these points the wheel must be thinned slightly. This is accomplished by touching the sides of the wheel at outer edge with carborundum dressing stick provided. It is seldom necessary to remove more than a sixty-fourth from side of the wheel.

### GRINDING

Level base of grinder with carpenter's level. Start grinder and place blade on right hand fixture with recessed side up and with pin through one hole in blade. Lower arm until blade just touches grinding wheel. The blade should just draw a spark. If blade does not touch wheel, turn adjusting screw at bottom front of right hand fixture clockwise. If contact between wheel and blade is too heavy, turn knob counter clockwise, bringing blade away from wheel. Heavy grinding is not necessary. Next, change vertical adjustment until bubble on level on arm is between the lines. Properly adjusted, bubble will be between lines and blade in light contact. After touching first tooth to wheel, lift arm and move blade around one click of the indexer. Touch wheel with tooth. Repeat until all teeth are sharpened. Repeat with other blade of pair. All blades bear serial numbers and should be ground in pairs. Do not adjust grinder between blades of a pair. This will bring them to the exact same diameter. As blades and grinding wheels wear down, vertical and horizontal adjustments must be changed. Turn adjusting wheels until blade is just in contact with wheel. Check small level on arm to see if bubble is between lines. If not, change vertical adjustment to make it so. When properly adjusted, bubble will be between lines and blade will be in light contact with wheel.

### BLUNTING BLADE TIPS

The tips of the teeth should be slightly blunted and both blades of a pair brought to the same diameter. Always keep blades in pairs. The blunting is accomplished by putting a pair of blades face to face on the left hand fixture of the grinder. Bring blades up to sanding wheel. Rotate blades all around while in light contact with sanding wheel. This slightly blunts tips and brings blades to same outside diameter.

### DEBURRING

Blades must be deburred on cutting edge or feather edge will roll over in use. Deburr by brushing cutting edge vigorously with nylon brush, such as a toothbrush.

#### Motor

Current ..... 110V. A.C. 50 or 60 cycles  
Size ..... ¼ H.P.  
Speed ..... 3450 RPM

#### Dimensions

Width ..... 15" = 381 MM  
Length ..... 18" = 457.2 MM  
Height ..... 9" = 228.6 MM

Shipping Weight ..... approx. 45 lbs. = 204.1 KGS