LORTONE

15" Lap #030-290
20" Lap #030-291

OSCILLATING LAPS
INSTRUCTIONS AND PARTS LIST

Oscillating Laps are used for flat polishing of slabs, geodes, bookends and clock faces. The oscillating action produces a smoother, flatter surface than can be obtained by hand polishing. We use a heavy steel frame and rugged cast aluminum pans for long, trouble-free operation. Includes polish pan with synthetic pad and separate grinding pan to help minimize contamination. Available in 15" and 20" models.

- Heavy-duty Welded Steel Frame
- Durable Cast Aluminum Grinding Pan
- Separate Cast Aluminum Polish Pan to Reduce Contamination
- Innovative Elastomer Support System
- 1/6 HP Motor

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SETUP

Check to make sure you have the following parts:

(1) Lap Base Assembly w/motor
(1) Polish Pan Assembly
(1) Grind Pan Assembly
(1) Mounting Plate Assembly
(1) Accessory Package containing:
  (3) Thumb Screws
    Mounting Bolts/Washers
  (1) Operators Manual
  (1) Warranty Card

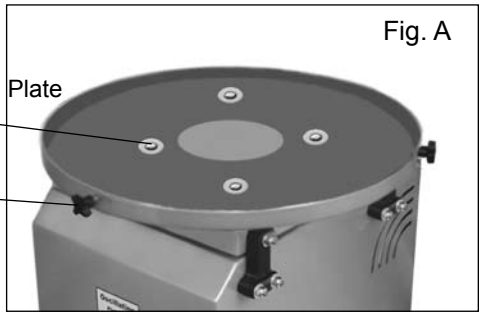
If any parts are missing, please contact your dealer or the factory immediately.

IMPORTANT
Read the following instructions before assembly or use of your machine. Failure to follow instructions could result in damage to the machine or injury to operator.

INSTALLATION

- Place machine on floor, preferably on a rubber mat or rubber backed piece of carpet.
- Adjust feet to level machine. IMPORTANT: An non-leveled machine will cause the grit, water and slabs to move to one side.
- Bolt the Mounting Plate to the Lap Base. (Fig. A)
- Install Thumb Screws into Mounting Plate.
- Plug cord directly in to wall receptacle; do not use extension cords.

Fig. A



PAN INSTALLATION

- Place the lap pan on the pan assembly as shown.
- Securely tighten the thumb screws to hold the pan in place. (Fig. B)

CAUTION
Do not operate without pan fastened securely to machine. Injury to operator or damage to machine may occur.

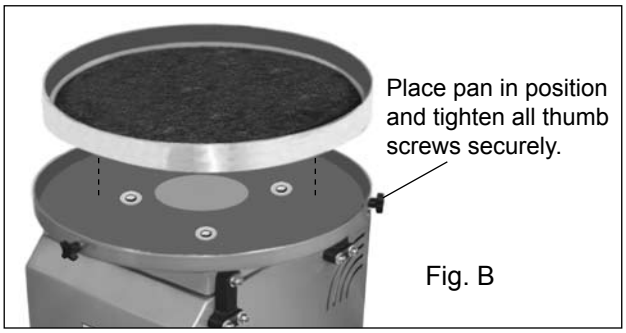


Fig. B

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PREPARATION

This machine is designed to grind and polish lapidary materials. Proper preparation is important to reduce the amount of time required and to ensure a good finish. Initial flatness of the material determines the length of time required for polishing. Saw marks will greatly increase the time required for grinding. All pieces should have the rough edges and protrusions removed by hand grinding if necessary. Typical grinding time is 4-6 hours per step but varies considerably with variations in rock hardness and initial flatness of the surface.

Use only graded grits. Broad graded grits and grits coarser than 220 may reduce grinding times but will greatly increase the risk of under-cutting on softer material and will cause excessive pan wear. We suggest the following:

3-Step Method		4-Step Method	
1st Step:	220 Graded SiC - Grind pan	1st Step:	220 Graded SiC - Grind pan
2nd Step:	600 Graded SiC - Grind pan	2nd Step:	400 Graded SiC - Grind pan
Polish:	Tin Oxide - Polish pan	3rd Step:	600 Graded SiC - Grind pan
		Polish:	Tin Oxide - Polish pan

OPERATION (3-Step Method)

1st Step

- Place 4 tablespoons (6 tablespoons for 20” Lap) of 220 grit in the grinding pan and add just enough water until a thin mixture is obtained. Caution: Too much water will cause excessive splash.
- Turn the machine on and place the rocks face down on the grit. If grinding multiple pieces, use rubber bands or plastic rings to prevent the edges from hitting each other. Short pieces of plastic drain pipe or sections of old garden hose joined in a circle work well.
- Add water occasionally to prevent mixture from drying out. Do not leave unattended while grinding.
- Grind until the material shows a continuous, even surface finish.

2nd Step (and 3rd Step if using the 4 Step Method)

- Clean the pan, rocks and rings well to remove all grit.
  IMPORTANT: Any grit remaining will contaminate the next step and dramatically affect the final results. Thorough cleaning is critical.
- Place 4 tablespoons (6 tablespoons for 20” Lap) of 600 grit in the grinding pan and add just enough water until a thin mixture is obtained.
- Continue grinding to remove the finish from the 1st step until the entire surface shows a continuous, smooth finish

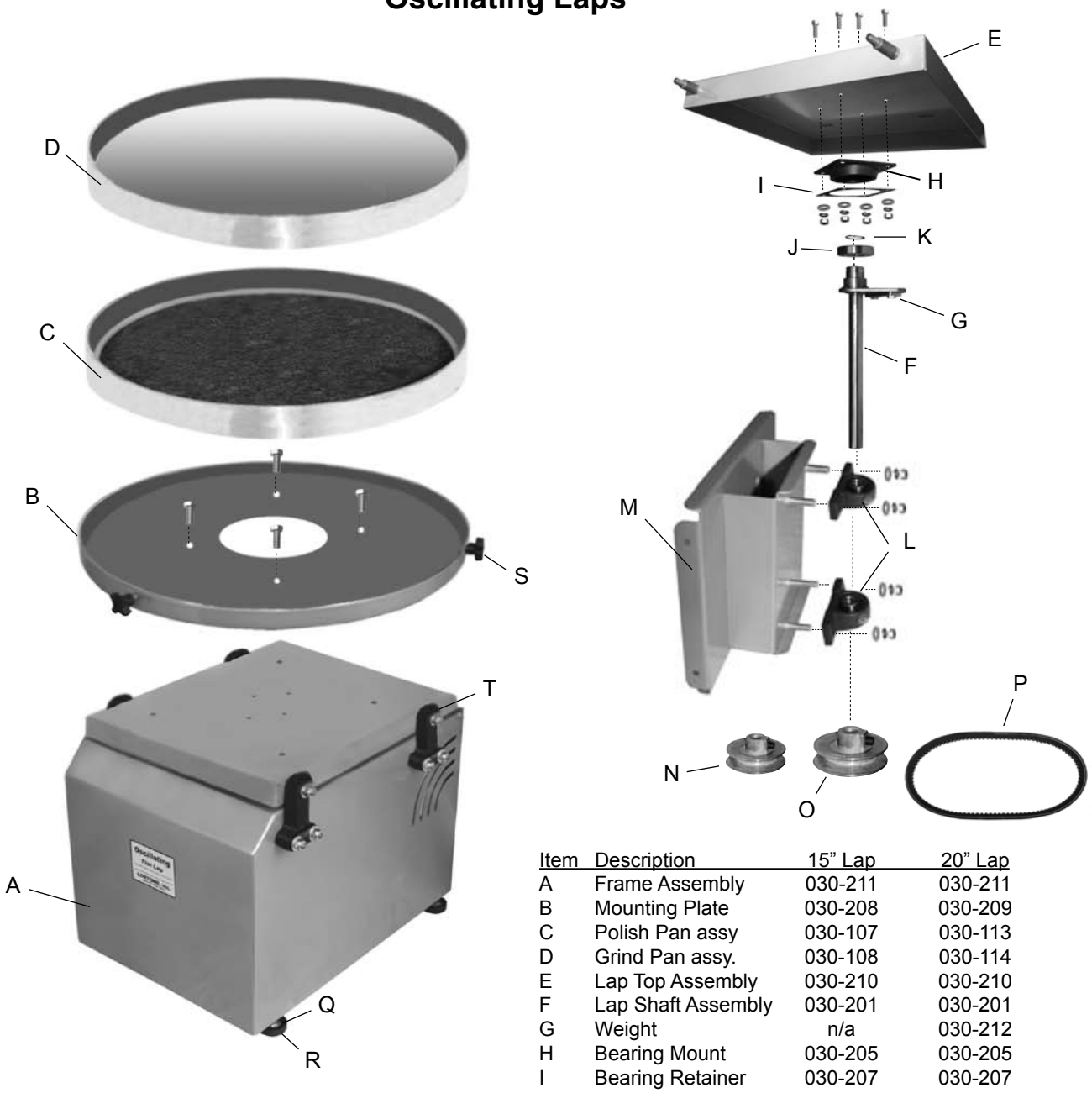
Polish Step

- Clean the pan, rocks and rings well to remove all grit.
  CAUTION: Any grit remaining will contaminate the polish pad and require its replacement.
- Remove the lap pan and install the polish pan. Securely tighten the thumb screws to hold the pan in place.
- Place 4-5 tablespoons (6-8 tablespoons for 20” Lap) of Tin Oxide on the polish pad and add just enough water until a thin mixture is obtained. Caution: Too much water will cause splashing and foaming.

OPERATING TIPS

- To decrease the processing time, change the grit after 2 hours. Do Not just add more grit as this will slow the process.
- Thin slabs must be weighted to ensure proper operation. Lead weights or other rocks may be attached directly to the slabs with dop wax, double-sided waterproof tape, or other means.
- Most difficulties in polishing result from contamination. Cleanliness between steps and in handling cannot be stressed enough. Clean all rocks, equipment, measuring scoops and hands prior to the polish stage.
- The first step is the most critical. Hold the slabs up to the light to check the finish. It should be the same across the entire surface. Grind until the material shows a continuous, even surface finish. Spend the time to make sure the first step is done right and the final steps will be much easier.

Oscillating Laps



Item	Description	15" Lap	20" Lap
A	Frame Assembly	030-211	030-211
B	Mounting Plate	030-208	030-209
C	Polish Pan assy	030-107	030-113
D	Grind Pan assy.	030-108	030-114
E	Lap Top Assembly	030-210	030-210
F	Lap Shaft Assembly	030-201	030-201
G	Weight	n/a	030-212
H	Bearing Mount	030-205	030-205
I	Bearing Retainer	030-207	030-207
J	Bearing	200-013	200-013
K	Retaining Ring	206-024	206-024
L	Bearing (2 required)	200-020	200-020
M	Motor Mount Assy.	030-213	030-213
N	Pulley (2 x 1/2)	211-005	211-005
	(220V 2-1/4 x 1/2)	211-009	211-009
O	Pulley (3 x 3/4)	211-020	211-020
P	Belt (4L220)	210-034	210-034
Q	Elevator bolt (4 required)	480-020	480-020
R	Foot Rubber (4 required)	209-002	209-002
S	Knob (3 required)	290-020	290-020
T	Vibration Link	030-206	030-206
	Lap Belt Guard (Not shown)	030-212	030-212
	Motor, 1/6 HP (Not shown)	300-030	300-030
	Polish Pad (Replacement)	030-009	030-012
	Bumper Ring (Replacement)	030-010	030-013

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