

DL-18

18" Double Deck Vibratory Lap

620-42-2000



Owners Manual



Important Safety Instructions Please Read Before Operating This Machine

1. Before plugging in this machine, make certain the electrical outlet is properly grounded and of the proper voltage. Also make certain that the machine switch is off and that your hands and the electrical connections are dry in order to avoid possible electrical shock.
2. Rock dust can be hazardous to one's health. Use sufficient water at all times while grinding and polishing stones so that rock dust does not form.
3. Before grinding and polishing any material, make certain that it will not produce toxic fumes or dust. If you should ever have occasion to grind metallic ores or other mineral specimens, be aware of the possibility that they may contain toxic quantities of such substances as uranium, lead, mercury, arsenic, asbestos, copper sulfate, etc.

Features

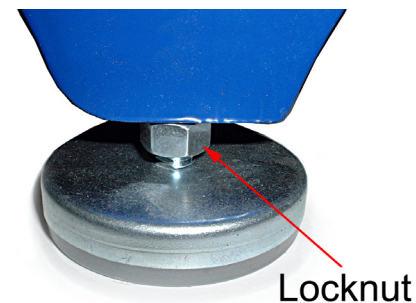
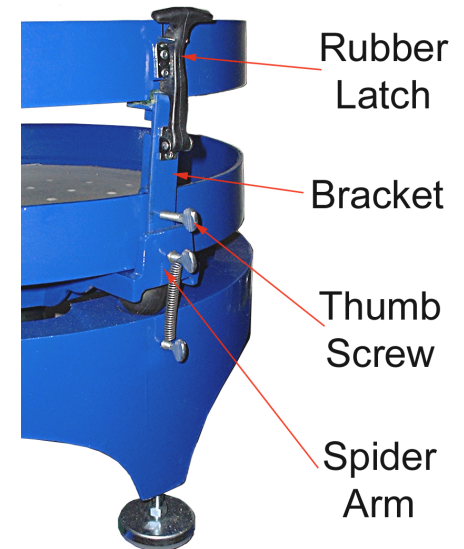
- ▶ Your new vibrating lap has only one moving part and that is the counterweight.
- ▶ The DL-18 Lap has a long horizontal movement without bounce.
- ▶ It is fast but gentle as it moves the stones about the plate.
- ▶ There are three types of surfaces used: a grooved pan for the rough grind, a smooth pan for fine grind and a polish pad to go in the pan for the final polish.
- ▶ Each machine is provided with two pans that are easily changeable and easy to remove for cleaning. You may run two grinding pans at once, or one grinding pan and one polish pan.

NOTE: the polish pan should be placed on top to avoid contamination.

Operation

SET-UP

1. Install the brackets for the upper pan over the lip of the bottom pan at the location of each spider arm. Tighten thumb screws and lock each bracket in place. Install top pan and hook rubber latches to lock in place.



2. Set the machine in a flat area and level the pan by adjusting the legs (simply loosen the locknut, screw the leg in or out as required, and re-tighten the locknut).

LAPPING

1. Prepare the stone by grinding all edges smooth or rounded. A single stone, larger than 3/4 of the lap needs no further attention. Smaller stones or slabs can be prepared as follows: Wrap the edges with four layers of masking tape, - or drop over the stone a rubber tube ring, - or cement the stone to the under side of a round piece of plywood. Thin slabs or small stones must be weighted. The ideal weight is 1/2 lb per square inch. Too much or too little weight will retard proper grinding. Lap surface should be a minimum of 3/4 covered when in use.
2. If stones are rough or hard: While the machine is running, put in 4 tablespoons of silicon carbide 60/90 grit. Add enough water to make a slurry the consistency of cream. Stop the motor and add the rocks, start motor. After each hour of running time add 1 tablespoon of 60/90 grit. After 5 or 6 hours check the flatness of material by drawing a series of lines on the rock with an aluminum pencil. Run for 15 minutes and if the lines

disappear, the rock is ready for the next step. Never let stones stand still on the lap. As you take off stones place them in a bucket of warm water and detergent, wash thoroughly. Use a brush on the sides of the rock as this is the danger area for contamination.

3. (Soft stones and smooth ones should be started at this point) use 220 silicon carbide grit prepared as in step 2. Run for 4 hours, and wash thoroughly.
4. Same procedure as step 3 using 400 grit silicon carbide. Time 4 hours.
5. Same procedure as step 3 using 600 grit silicon carbide. Time 5 hours.
6. After cleaning the stone and lap, place polish pad in upper pan and add 4 tablespoons of tin or cerium oxide. Add enough water to make a slurry and run for 4 hours or until polished.

QUICK METHOD

1. Start with 4 tablespoons of 60/90 grit silicon carbide (mix all grits with water as in previous section) and add 1 tablespoon of grit for each of five hours, then allow grit to break down until 8 hours has passed.
2. Wash thoroughly and add 400 grit. Run 4 hours.
3. Wash thoroughly and add 600 grit. Run 5 hours.
4. Wash thoroughly and use the polish pad and polish. Run until polished.

Parts and Accessories	
Description	Order Number
Polish Pad	621-93-0060
Smooth Pan	621-42-2003
Rough Pan	621-42-2004
Bracket (set of 4)	621-42-2115
Rubber Ball	690-42-2005
Spring	690-42-2007

Orders/Technical Support:

Toll Free: (800)253-2954
Outside US: (760)255-1030
Fax: (760)255-1077
E-Mail: info@diamondpacific.com



2620 W Main St, Barstow Ca. USA, 92311