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Rociprolap Installation Instructions

1 Install the four leveling pads. Lock nuts on top side.

2. Insert one steel disc in each nylon thrust bearing container. Make sure the steel disc is down flat. Place two (2) nylon thrust bearings in each container.

3. Install the lap plate. Be sure the plate is resting on the nylon thrust bearings by twisting the plate back and forth. You can feel the plate dragging. A visual inspection will make certain.

4. Place a level on the machined surface of the lap plate. Adjust leveling pads. The level should now be turned 90 degrees, or one quarter (1/4) turn, and further adjustments of the leveling pads should be made.

5. Remove the lap plate and put enough oil in the ball containers to coat the disc. About six drops should be enough. The thrust plate must be coated with oil as well.

6. Replace the lap plate, making sure it is down on the nylon thrust bearings. Start the machine and check the leveling pads by placing a finger against the rubber pads and the floor. If one vibrates or bounces, loosen the lock nuts and screw the leveling pad down by hand and tighten the lock nuts securely. Observe the lap plate in operation. With no load on it, the lap plate should revolve about two (2) to three (3) time per minute. When lapping or polishing it is normal for the lap plate to either slow down or revolve in the opposite direction of the no load condition.

Caution:

Take extreme care with the wearing ring surface. This is the portion of the plate that rides on the nylon thrust bearings. It must be kept scrupulously clean and well oiled, with 30 or 40 wt. oil. Never use grease.

Hazardous Condition Warning:

Never start the Rociprolap with the lap plate removed.

Miscellaneous Advice

1 Inspect the nylon thrust bearings each time the plate is removed. If they are dirty or discolored then the thrust plate is not being kept clean.

2. When the lap plate begins to revolve faster than normal it is an indication that the thrust balls are failing or that you have too much oil on the bearings. Too much oil is easily remedied with a rag to soak up/clean off the bearing area. About 6 drops of oil is all that is necessary. If too much oil is not the problem (the problem usually is overly worn bearings), you must change the complete set. The nylon thrust bearings are measured and packaged in sets - individual bearings may vary by as much as .005 of an inch. Mixing them could damage the machine.

3. Clean your material and machine thoroughly after each lapping operation. One grit of 80 grit can scratch your material if allowed to mix with the next lapping operation.

4. Never leave your flats on the lap plate when the machine is stopped for an indefinite period of time. They can and will stick to the lap plate. Should you ever have this problem, add water to the plate and start the machine. If the flat won=t come loose, jar it slightly with a block of wood. Place the edge of the flat on the bumper ring when through with a lapping procedure to avoid it sticking to the lap plate.

5. After using the machine, when the machine won=t be in use for a day or so, put a thin coat of oil on the inside of the plate. This will keep it from rusting.

6. Never do fine lapping on a rusty plate B this means the 400 and 600 grit operations. The scale from the rust will scratch the surface of your material.

7. Never overcrowd the plate. A 16" piece is the normal operating maximum for the 20" model, and that proportion should be followed in the other plate sizes.

Lapping Procedure for a 24" lap plate

1 With the machine running, pour about 4 tbsp. of 80 grit on the lap plate.

2. Pour in enough water to create a slurry or liquid state.

3. Stop the machine and place material to be lapped on the lap plate and start the machine.

4. Due to the grit breaking down as the machine runs, it is recommended that 1 tbsp. of grit be added for every hour of operation. (Please Note: 80 grit is recommended for very hard material only.)

How to tell when material is flat

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1. Wash the piece off.

2. Using an aluminum marking pencil, mark the bottom of the piece off in 2" squares.

3. Replace and lap for about 10 more minutes.

4. Remove piece and examine the bottom of the piece. If the lines have been lapped off, the piece is flat and ready for the next lapping operation.

Second lapping operation

Presuming that the material has been lapped flat on 80 grit, 4 tbsp. of 220 grit and enough water to create a slurry should be sufficient for four (4) hours of lapping, which should take you to the next stage in the lapping process.

Third lapping operation

Use 4 tbsp. of 400 grit for about four (4) hours.

Fourth lapping operation

Use 4 tbsp. of 600 grit for about five (5) hours.

Polishing

Install the polishing pad. Replace the splash guard and bumper ring. Start the machine and place 3 tbsp. of tin oxide on the pad and add enough water to create a liquid state. Most objects require about five (5) hours of lapping to be polished B however, the size and weight of the object will make a difference in the lapping time and you will have to be your own judge.

Note:

These instructions are for a 24" lap plate. Use proportionally larger or smaller amounts of grit for larger or smaller lap plates.

Important Information

Additional information concerning leveling the machine

DO NOT tighten the level ham nuts for the first five minutes of running time. This gives the pads a chance to take a good set. During this time, put your finger alongside the leveler pads next to the floor. If there is any vibration, try to screw the leveler pads down. If you move the machine, or if the machine should move, you must follow this same procedure for re-leveling.

DO NOT bolt the machine down! Doing so will damage the bearing in the lap plate. Arrange the power cord so that if the machine should move it will disconnect itself.

DO NOT trim the polishing pad. Work it up the side of the splash guard then put in the bumper ring on top of the polishing pad so that the polishing pad will not slip.

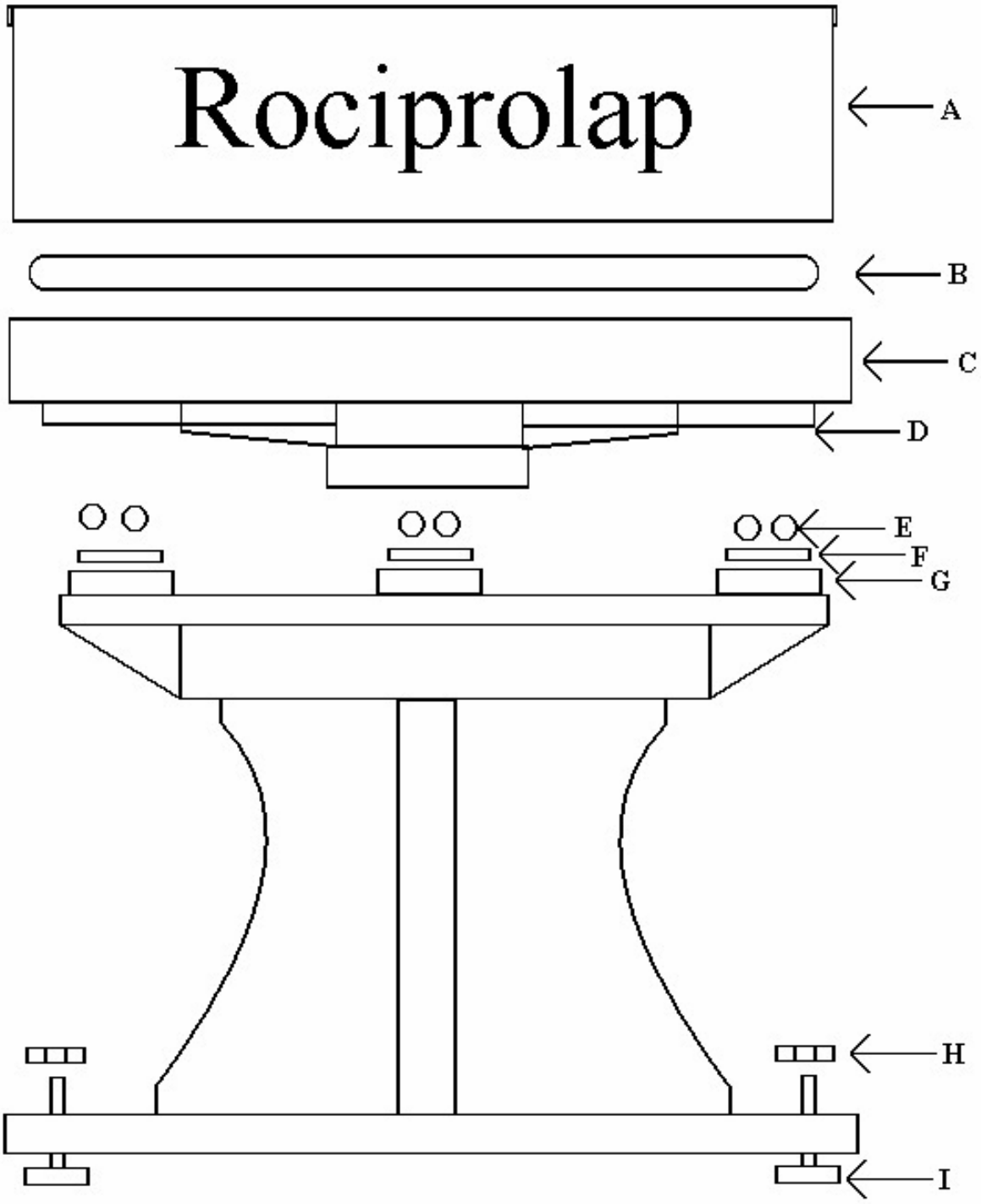
To tighten the plash guard

Hold the splash guard with the corrugated edge facing you and rest the guard on a hard flat surface. Lightly hammer the corrugated edge. Do only a very short distance at a time, and try for fitting size.

When to change the nylon thrust bearings
If the bearings stop revolving in the bearing containers then the nylon thrust bearings have worn flat spots in themselves. If run too long in this condition they will wear dimples in the steel discs, wearing out new sets of bearings even faster. Turn the discs over if a dimple is worn into one side. A nice circular patter worn into the steel disc is good.

Additional information
When lapping a single piece always put in a bumper ring or a pusher to keep the material moving over the entire surface of the lap plate B this will allow the lap plate to wear evenly.
When lapping several pieces that have protective rings around them, remove the outer bumper ring. This will allow the material to work out over the undercut area of the lap plate.

Bumper rings are made of rubber or plastic tubing with a dowel inserted to form a ring. They can be held together with glue or they can be taped together. These materials can be obtained at most automotive parts houses.



A - Splash Guard
B - Bumper Ring
C - Lapping Plate
D - Wearing Surface
E - Nylon Bearings
F - Steel Disks
G - Ball Containers
H - Lock Nut
I - Leveling Feet