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## **1 PITCH MUST BE CLEAN.**

Strain melted formula through a minimum four layers of UPI's optical quality cheesecloth before applying to lap.

## **2 CREATE A FORM for the pitch lap.**

Apply masking tape around the circumference of the lap, leaving  $\frac{3}{8}$ " to  $\frac{1}{2}$ " above the lap edge as a "dam" to prevent pitch overflow.

## **3 HEAT PITCH SLOWLY until thoroughly melted.**

Broadly melt polishing pitch using an electric melting pot to insure consistency. Universal Photonics' melting pots have heating elements throughout the tank so heat is applied to all surfaces of the pitch simultaneously, thereby eliminating concentrated "hot spots". Pour the melted pitch onto the lap, filling to the height of the masking tape.

## **4 ALLOW LAP TO COOL for approximately one hour.**

If air bubbles are present, pass a propane torch over lap surface, using only a yellow flame at a reasonable distance to build slow heat. Once bubbles have disappeared, let lap cool for at least one hour.

## **5 PRESS OR SCRIBE DESIRED GROOVING PATTERN INTO PITCH SURFACE after removing tape.**

Once grooved, projecting elements can be pressed out with matching tool or workpiece with proper curve. Be careful not to close off any of the existing grooves. "Pressing" the curve into the pitch is essential for getting the lap on radius quickly.

## **6 SET MACHINE STROKE TO EXTEND THE WORKPIECE 10% TO 15% PAST TOOL'S EDGE.**

This is a general guideline; larger jobs will usually require a slower stroke. Experimentation based on application, will reveal optimum numbers.

## **7 APPLY POLISHING SLURRY ON SURFACE LIBERALLY BEFORE PLACING WORK ON TOOL.**

This primes surface and reduces possibility of defects in the first minutes of polishing. Slight warming of the polishing tool (just enough for thumbnail to leave imprint) also aids in startup process.

## **8 INSURE THAT THE LAP DOESN'T DRY UP during the process.**

A good flow of polishing slurry is essential for optimum results. If surface tension of the pitch lap is too high, a light coating of UPI's refined beeswax will reduce friction and create a "softer" bite into the lens surface at the expense of stock removal.