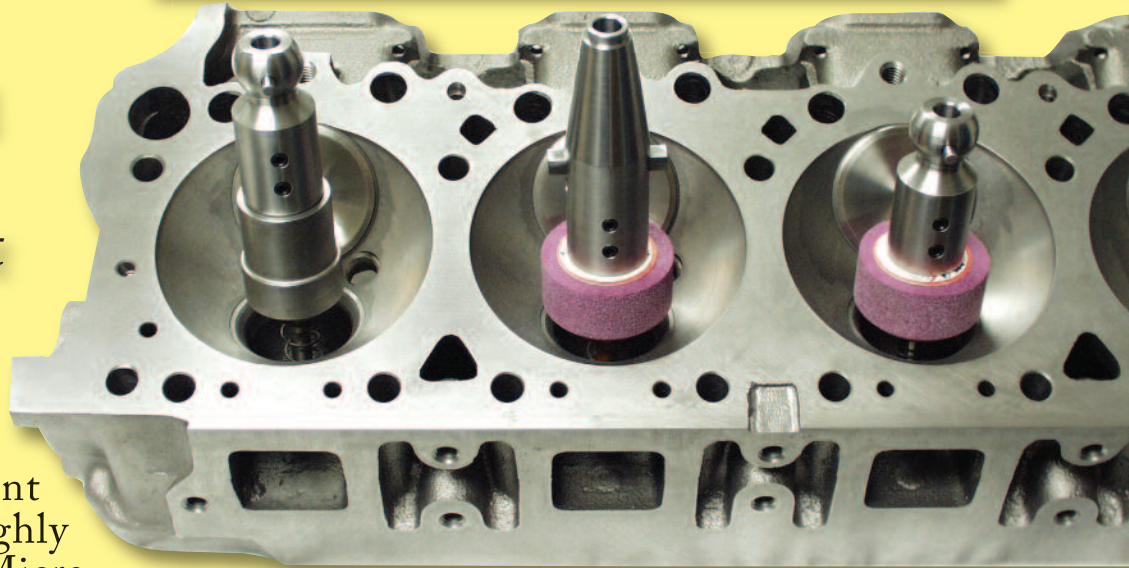


VALVE SEAT LAP MASTER



Innovative new tooling designed to save time and improve seat finish after form cutting.



Product development involves a system of highly specialized Diamond Micro-Finishing Laps and Spindle Drive Bodies adapted to fit drive spindles on Automotive and Diesel Seat and Guide machines. Spindle Drive Bodies will also fit conventional Sioux and Kwikway valve seat grinding wheels. The system is used in the reconditioning of valve seats in a cylinder head to reduce time in setup, reduce labor costs and increase the surface quality of the seat.



LAP MASTER DRIVE BODIES

PATENT PENDING

Machine	Style	I.D.	Thread	Product Number	Price
PETERSON	Ball Top	.375	11/16-16	7419635	\$149.99
WINONA	Ball Top	.385	11/16-16	7419636	\$149.99
T&S	Ball Top	.389	11/16-16	7419637	\$149.99
SUNNEN	Ball Top	.375	13/16-13	7419638	\$149.99
KWIKWAY	Ball Top	.385	13/16-13	7419639	\$149.99
DCM	Ball Top	.389	13/16-13	7419640	\$149.99
SERDI	Tapered Top	.375	11/16-16	7419641	\$239.99
NEWEN	Tapered Top	.375	13/16-13	7419642	\$239.99

Diamond Micro-Laps will be made to order per customers needs. Special angles available. Size range 7/8" through 2-5/8".



www.radiac.com

Salem: 800-793-8765 or fax 618-548-9234

1015 S. College Ave • Salem, IL 62881

Oswego: 800-223-0457 or fax 630-898-1796

101 Kendall Point Drive, Oswego, IL 60543

SEAT LAP MASTER DIAMOND MICRO-FINISHING SYSTEM

BENEFITS OF TOOLING

Tooling system is for all internal combustion engine cylinder heads. This universal micro-finishing tool package can be used with conventional seat and guide machines as well as single and double stanchion machines using either diamond laps or conventional valve seat grinding wheels. This system will improve seat finish quality, reducing time and labor costs involved with finishing valve seats.

Example: The form tools used to create the valve seat form, collects deposits from the base metal of the seat from heat and also wears during use creating imperfections on the seat surface, either chatter or a threading appearance. This creates a surface with less than desirable vacuum sealing for the valve to operate correctly. With this new tooling system adapted to fit many machines, it enables the operator to finish work without removing the cylinder heads from the machine. Improving valve seat surface quality and sealing of the valve to the surface of the valve seat, thus saving set-up time, labor, etc.

Without this type of tooling the operator would have to remove the heads from the machine, set up on a work bench and grind seats with conventional valve seat grinding wheels to remove valve seat imperfections which would require more set up time and labor costs.

Furthermore the tooling will also allow the operator to remove minimal material from the valve seat surface which relates to longer valve seat and head life.



CUSTOMER TOOLING

Customer valve guide pilot tooling used with this surfacing system must be in excellent condition to use this system. Carbide pilots are the best for rigidity, but tool steel pilots will work fine if not worn on the tops.

Worn guide pilots will cause vibration of the micro-finishing lap, valve seat surface run out, and surface finish problems. Vibration will also damage the cutting surface of the micro-finishing lap. Bounce springs are a must when using the micro-finishing laps. Bounce springs used between the lap and the guide keeps the lap suspended above the valve seat so it doesn't come in contact with the seat until the lap is spinning the recommended 40-50 spindle rpm. If springs are not used it will damage the lap.

MACHINES

Sunnen	K.I.	Kwikway	D.C.M.
T & S	Winona	Serdi	Newen

OPERATING INSTRUCTIONS FOR RADIAC VALVE SEAT LAP MASTER

For Diamond Laps use 40-50 rpm spindle speed with (Bounce Spring).

For Abrasive Seat Stones use higher rpm's with (Bounce Spring)

1. It is important that all tooling be in good condition especially the top sizes on the guide pilots to keep the set up ridged. Also the dresser pilot and stone holder spinners for truing seat stones.
2. Clean guide pilot tops and I.D. of the driver body with nylon brush before use.
3. A light oil can be used on the pilot top before use.
4. Clean all threads on seat stones, diamond laps and driver bodies before use. This is a **MUST DO**.

CLEANING OF THE DIAMOND LAP SEAT WHEELS

1. You can use compressed air and a wire brush with light pressure to remove any grinding accumulation on the lap.

SEAT STONE DRESSING

1. A variation of fine to medium dressing speeds across the face of the abrasive valve seat wheel may be required on different valve seat materials. Dresser pilot and stone holder spinners must be in good condition for truing stones correctly.

SEAT FINISHING OPERATION (Must Be Used with Bounce Springs)

1. This is all about feel and a light touch of the diamond lap or abrasive seat stone against the valve seat surface.
2. Do not crowd or use force when the diamond lap or abrasive seat stone is in contact with the valve seat. It will only take a light touch to achieve good results.
3. Do not start the machine with the diamond lap or seat stone in contact with the valve seat. Have machine up to operating rpm before applying lap or seat stone to the valve seat surface.



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