



SHOVELHEAD

Unmatched  
PERFORMANCE  
& DURABILITY



Serving Harley-Davidson dealers and motorcycle shops since 1983

[www.jprecision.com](http://www.jprecision.com)





## MACHINING SERVICES FOR SHOVELHEAD Engines (1999-up)

### HEAD: PORTING

			Dealer Price	Retail Price
667	STAGE IIB	(Stock casting & aftermarket heads) The Ultimate upgrade for your Shovelheads. We redesigned and raised the intake port by welding to increase velocity, allowing for a crisper throttle response and more power. Includes: Valve guides, valve seals, valve spring kit, valves.	Call us	1175.71

### HEAD: WORK OPTIONS

			Dealer Price	Retail Price
650	Intake manifold porting (Carburator)		Call us	54.29
256	MACHINE (2) heads for compression release valves (includes 1 set of AV&V compression release valves)		Call us	214.29
607	PISTON valve pockets machined for valve clearance (2 pistons)		Call us	70.00
613	Check and adjust cc on Twin Cam / EVO / Sportster		Call us	67.14

### CYLINDER HEADS

#### OVERALL REBUILD (2) HEADS

- Includes**
- (4) new AV&V valve guides and valve seals
  - Head gasket faces resurfaced
  - Valves centerless grinded
  - Set-up spring pressure & reassembly
  - Soda blast combustion chambers & ports
  - CNC seat job
  - Ultrasonic washed

			Dealer Price	Retail Price
203	Overall rebuild (2) heads		Call us	479.40
222	Overall rebuild (2) heads + Glass bead		Call us	515.71

### HEAD: ESTHETIC

			Dealer Price	Retail Price
103	DISASSEMBLE & degrease (2) heads		Call us	44.29
105	SODA BLAST carbon out of (2) heads		Call us	44.29
107	GLASS BEAD (2) previously painted heads		Call us	131.43
108	GLASS BEAD (2) unpainted heads		Call us	100.00
109	SAND BLAST, (2) painted heads (ready to paint)		Call us	64.29
110	SAND BLAST & paint (2) heads		Call us	160.00
111	SAND BLAST, paint & highlight (2) heads		Call us	194.29
114	HILITE fins (2) heads		Call us	65.71
115	WELD & rebuild cooling fins		Call us	37.14
116	ULTRASONIC cleaning of (2) heads (ready for assembly)		Call us	51.43

### HEAD: VALVE SEATS

			Dealer Price	Retail Price
204	CNC 3 ANGLE seat job (2 heads)		Call us	110.00
205	CNC HP seat job (2 heads)		Call us	120.00
210	MACHINE & install (1) valve seat (valve seat included)		Call us	98.57
211	MACHINE & install (4) valve seats (valve seats included)		Call us	247.14
213	WELD & repair valve seat receiver hole (valve seat included)		Call us	101.43

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## MACHINING SERVICES FOR SHOVELHEAD Engines (1999-up)

### HEAD: VALVE GUIDES

		Dealer Price	Retail Price
218	REMOVE, install & fit (1) valve guide (labor only)	Call us	32.86
219	REMOVE, install & fit (4) valve guides (labor only)	Call us	65.71
223	WELD & REPAIR valve guide receiver hole to std (includes 1 new valve guide & valve seat)	Call us	174.29
224	BORE CLEAN damaged valve guide receiver hole	Call us	94.29
226	CUT valve guide seal section	Call us	31.43

### HEAD: VALVES

		Dealer Price	Retail Price
231	CLEAN carbon out of (1) valve	Call us	11.43
228	RECONDITION (1) valve	Call us	11.43
229	RECONDITION (4) valves	Call us	32.86
227	CLEAN & RECONDITION (4) valves	Call us	47.14

### HEAD: RESURFACING

		Dealer Price	Retail Price
236	RESURFACE (2) heads + bolt inserts machined deeper	Call us	92.86
240	RESURFACE & counter bore (2 heads)	Call us	107.14

### HEAD: MISCELLANEOUS

		Dealer Price	Retail Price
245	INSTALL (1) spark plug helicoil	Call us	44.29
248	WELD & repair (1) spark plug hole (helicoil included)	Call us	124.29
251	MACHINE (2) heads dual plug	Call us	195.71
253	DUAL PLUG modification & welding for long plug (2 heads)	Call us	257.14
259	CONVERT early short plug to long plug & helicoil (2 heads)	Call us	257.14
265	WELD & REPAIR (1) intake flange lip	Call us	51.43
266	WELD & REPAIR exhaust bolt hole + helicoil	Call us	67.14
267	INSTALL (1) Helicoil for rocker box stud	Call us	35.71
268	INSTALL (1) Helicoil on exhaust flange	Call us	35.71
269	WELD & REPAIR 1 exhaust flange	Call us	128.57
264	MACHINE spring seat faces on early Shovels to install late style lower collars (2 heads)	Call us	45.00
262	WELD and REPAIR damaged combustion chamber	Call us	37.14
261	MODIFY early lower collars for valve seals installation	Call us	32.86

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## MACHINING SERVICES FOR SHOVELHEAD Engines (1999-up)

### CYLINDERS: BORING & HONING

Dealer Price	Retail Price
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Note: For EVO cylinders that are sent with base gaskets still adhered (late H-D gaskets are very difficult to remove), we will remove the gaskets by machining the lower deck. This operation also trues the cylinder lower deck.

307	HONE & FIT only, (2) cylinders with stress plates	Call us	90.00
312	BORE, HONE & fit (2) cylinders with stress plates	Call us	155.71
313	SAME for 3 5/8" bore	Call us	170.00

### CYLINDERS: ESTHETIC

Dealer Price	Retail Price
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122	SAND BLAST (2) cylinders (ready to paint)	Call us	58.57
123	SAND BLAST & PAINT (2) cylinders black (paint included)	Call us	160.00

### CYLINDERS: MISCELLANEOUS

Dealer Price	Retail Price
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318	REFACE (2) cylinders - lower decks	Call us	60.00
322	REFACE (2) cylinder upper decks + flange	Call us	88.57





## MACHINING SERVICES FOR SHOVELHEAD Engines (1999-up)

### CRANKS

		Dealer Price	Retail Price
415	RECONDITION, assemble & true 1 crank & connecting rods (complete job, labor only) Rod races replacement	Call us	350.00
		add 28.00	
416	SAME as previous + Dynamic balancing	Call us	492.86
418	RECONDITION, glass bead & fit (2) connecting rods	Call us	144.29
426	MACHINE (1) S&S flywheel for thrust washer	Call us	64.29
420	REPLACE Rod races (Labor only)	Call us	64.29

### ENGINE CASES

		Dealer Price	Retail Price
510	BORE case for Big bore cylinders (case must be assembled & torque, unnecessary to remove cylinder studs)	Call us	230.00
512	RESURFACE engine case deck (cylinder studs must be removed)	Call us	124.29
514	REMOVE cylinder studs (helicoils extra if required)	Call us	42.86
513	WELD & repair left case primary O ring lip (studs must be removed)	Call us	192.86
516	WELD & repair timing plug hole (helicoil included)	Call us	107.14
515	HELICOIL timing plug hole	Call us	52.86
518	OVERSIZE bore, breather gear hole .030"	Call us	84.29
519	SLEEVE breather gear hole (welding extra if required)	Call us	270.00
521	REMOVE & reinstall new case pinion bearing race + HONE & FIT (race not included)	Call us	152.86
523	HONE & FIT pinion bearing race	Call us	82.86
524	SLEEVE cam bearing hole	Call us	228.57
526	MACHINE left case for oversize bearing race insert	Call us	670.00
527	MACHINE engine case supports	Call us	122.86
529	CONVERT SHOVEL case to EVO style (includes 8 long helicoils)	Call us	388.57
530	Replace & Fit cam bushing (labor only)	Call us	58.57
531	Replace & Fit pinion bushing (labor only)	Call us	44.29
532	Replace TIMKEN cups + "C" clip	Call us	44.29

### ENGINE CASES : ESTHETIC

		Dealer Price	Retail Price
130	GLASS BEAD unpainted engine case (oil galleries masked)	Call us	94.29
131	GLASS BEAD painted engine case (oil galleries masked)	Call us	128.57
133	SAND BLAST engine case ready to paint (oil galleries masked)	Call us	70.00
134	MASK & PAINT engine case	Call us	128.57
135	OIL GALLERY spot weld removal & installation of 1/8 NPT plug (allows better oil gallery clean up)	Call us	60.00

### MISCELLANEOUS

		Dealer Price	Retail Price
606	REFACE & polish (4) rocker arms	Call us	91.43
609	REBUSH & align hone (4) rocker arms (labor only)	Call us	98.57
610	HONE & fit (4) oversize tappets	Call us	94.29
611	REPLACE, HONE & FIT transmission main shaft bushing (labor only)	Call us	96.43

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