



SHOVELHEAD

Unmatched
PERFORMANCE
& DURABILITY



Serving Harley-Davidson dealers and motorcycle shops since 1983

www.jprecision.com



MACHINING SERVICES FOR SHOVELHEAD Engines

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 | 1150.00 |
|-----|-----------|--|---------|---------|

HEAD WORK OPTIONS

Dealer Price Retail Price

| | | | | |
|-----|--|--|---------|--------|
| 650 | Intake manifold porting (Carburator) | | Call us | 45.94 |
| 256 | MACHINE 2 heads for compression release valves (includes 1 set of AV&V compression release valves) | | Call us | 183.75 |
| 607 | PISTON valve pockets machined for valve clearance (2 pistons) | | Call us | 59.06 |

CYLINDER HEADS

Dealer Price Retail Price

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

| | | | | |
|-----|--------------------------------------|--|---------|--------|
| 203 | Overall rebuild 2 heads | | Call us | 411.25 |
| 222 | Overall rebuild 2 heads + Glass bead | | Call us | 442.50 |

ESTHETIC

| | | | | |
|-----|---|--|---------|------------|
| 103 | DISASSEMBLE & degrease 2 heads | | Call us | 37.50 |
| 105 | SODA BLAST carbon out of 2 heads | | Call us | 36.88 |
| 107 | GLASS BEAD 2 previously painted heads | | Call us | 112.50 |
| 108 | GLASS BEAD 2 unpainted heads | | Call us | 85.94 |
| 113 | GLASS BEAD 2 unpainted heads outside only | | Call us | 85.94 |
| 109 | SAND BLAST, 2 painted heads (ready to paint) | | Call us | 50.00 |
| 110 | SAND BLAST & paint 2 heads | | Call us | 166.25 |
| 111 | SAND BLAST, paint & highlight 2 heads | | Call us | 166.25 |
| 114 | HIGHLIGHT fins (2 heads) | | Call us | 50.00 |
| 115 | WELD & rebuild cooling fins | | Call us | 31.25 & up |
| 116 | ULTRASONIC cleaning of 2 heads (ready for assembly) | | Call us | 43.75 |

VALVE SEATS

| | | | | |
|-----|--|--|---------|------------|
| 204 | CNC 3 ANGLE seat job (2 heads) | | Call us | 65.63 |
| 205 | CNC HP seat job (2 heads) | | Call us | 91.88 |
| 239 | REMOVE & INSTALL 4 valve seats (valve seats included) | | Call us | 118.13 |
| 210 | MACHINE & install 1 valve seat (valve seat included) | | Call us | 87.50 |
| 211 | MACHINE & install 4 valve seats (valve seats included) | | Call us | 196.88 |
| 213 | WELD & repair valve seat receiver hole (valve seat included) | | Call us | 87.50 & up |

VALVE GUIDES

| | | | | |
|-----|--|--|---------|-------------|
| 218 | REMOVE, install & fit 1 valve guide (labor only) | | Call us | 25.00 |
| 219 | REMOVE, install & fit 4 valve guides (labor only) | | Call us | 52.50 |
| 223 | WELD & REPAIR valve guide receiver hole to std (includes 1 new valve guide & valve seat) | | Call us | 150.00 & up |
| 224 | BORE CLEAN damaged valve guide receiver hole | | Call us | 78.75 |
| 226 | CUT valve guide seal section | | Call us | 26.25 |



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CYLINDER HEADS (con't)

Dealer Price Retail Price

VALVES

| | | | |
|-----|------------------------------|---------|-------|
| 231 | CLEAN carbon out of 1 valve | Call us | 5.00 |
| 228 | RECONDITION 1 valve | Call us | 8.75 |
| 229 | RECONDITION 4 valves | Call us | 26.25 |
| 227 | CLEAN & RECONDITION 4 valves | Call us | 39.38 |

RESURFACING

| | | | |
|-----|--|---------|-------|
| 236 | RESURFACE 2 heads + bolt inserts machined deeper | Call us | 79.69 |
| 240 | RESURFACE & counter bore (2 heads) | Call us | 91.88 |

SPARK PLUGS

| | | | |
|-----|--|---------|-------------|
| 245 | INSTALL 1 spark plug helicoil | Call us | 36.25 |
| 248 | WELD & repair 1 spark plug hole (helicoil included) | Call us | 106.25 & up |
| 251 | DUAL PLUG modification (2 heads) | Call us | 160.00 |
| 253 | DUAL PLUG modification & welding for long plug (2 heads) | Call us | 175.00 & up |
| 259 | CONVERT early short plug to long plug & helicoil (2 heads) | Call us | 164.06 |

MISCELLANEOUS

| | | | |
|-----|--|---------|-------------|
| 265 | WELD & REPAIR 1 intake flange lip | Call us | 43.75 & up |
| 266 | WELD & REPAIR exhaust bolt hole + helicoil | Call us | 56.25 & up |
| 267 | INSTALL 1 Helicoil for rocker box stud | Call us | 26.25 |
| 268 | INSTALL 1 Helicoil on exhaust flange | Call us | 26.25 |
| 269 | WELD & REPAIR 1 exhaust flange | Call us | 100.00 & up |
| 264 | MACHINE spring seat faces on early Shovels to install late style lower collars (2 heads) | Call us | 26.25 |
| 262 | WELD and REPAIR damaged combustion chamber | Call us | 31.25 & up |
| 261 | MODIFY early lower collars for valve seals installation | Call us | 15.75 |

CYLINDERS

Dealer Price Retail Price

ESTHETIC

| | | | |
|-----|---|---------|--------|
| 122 | SAND BLAST 2 cylinders (ready to paint) | Call us | 49.88 |
| 123 | SAND BLAST & PAINT 2 cylinders black (paint included) | Call us | 111.56 |

BORING & HONING

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 | 76.13 |
| 312 | BORE, HONE & fit 2 cylinders with stress plates | Call us | 118.13 |
| 313 | SAME for 3 5/8" bore | Call us | 131.25 |

MISCELLANEOUS

| | | | |
|-----|--|---------|-------|
| 318 | REFACE 2 cylinder lower decks | Call us | 49.88 |
| 322 | REFACE 2 cylinder upper decks + flange | Call us | 76.13 |



MACHINING SERVICES FOR SHOVELHEAD Engines

CRANKS

| | | Dealer Price | Retail Price |
|-----|---|--------------|--------------|
| 415 | RECONDITION, assemble & true 1 crank & connecting rods (complete job, labor only) | Call us | 281.25 |
| | Rod races replacement | add 28.00 | |
| 416 | SAME as previous + Dynamic balancing | Call us | 418.75 |
| 418 | RECONDITION, glass bead & fit 2 connecting rods | Call us | 123.75 |
| 426 | MACHINE 1 S&S flywheel for thrust washer | Call us | 52.50 |
| 420 | REPLACE Rod races (Labor only) | Call us | 43.75 |

ENGINE CASES

| | | Dealer Price | Retail Price |
|-----------------|---|--------------|--------------|
| ESTHETIC | | | |
| 130 | GLASS BEAD unpainted engine case (oil galleries masked) | Call us | 81.25 |
| 131 | GLASS BEAD painted engine case (oil galleries masked) | Call us | 106.25 |
| 133 | SAND BLAST engine case ready to paint (oil galleries masked) | Call us | 60.00 |
| 134 | MASK & PAINT engine case | Call us | 106.25 |
| 135 | OIL GALLERY spot weld removal & installation of 1/8 NPT plug (allows better oil gallery clean up) | Call us | 51.50 |

MISCELLANEOUS

| | | | |
|-----|--|---------|--------|
| 510 | BORE case for Big bore cylinders (case must be assembled & torque, unnecessary to remove cylinder studs) | Call us | 196.88 |
| 512 | RESURFACE engine case deck (cylinder studs must be removed) | Call us | 105.00 |
| 514 | REMOVE cylinder studs (helicoils extra if required) | Call us | 36.75 |
| 513 | WELD & repair left case primary O ring lip (studs must be removed) | Call us | 165.00 |
| 516 | WELD & repair timing plug hole (helicoil included) | Call us | 91.88 |
| 515 | HELICOIL timing plug hole | Call us | 45.94 |
| 518 | OVERSIZE bore, breather gear hole .030" | Call us | 72.19 |
| 519 | SLEEVE breather gear hole (welding extra if required) | Call us | 231.25 |
| 521 | REMOVE & reinstall new case pinion bearing race + HONE & FIT (race not included) | Call us | 131.25 |
| 523 | HONE & FIT pinion bearing race | Call us | 70.81 |
| 524 | SLEEVE cam bearing hole | Call us | 196.56 |
| 526 | MACHINE left case for oversize bearing race insert | Call us | 575.00 |
| 527 | MACHINE engine case supports | Call us | 105.00 |
| 529 | CONVERT SHOVEL case to EVO style (includes 8 long helicoils) | Call us | 333.38 |
| 530 | Replace & Fit cam bushing (labor only) | Call us | 49.88 |
| 531 | Replace & Fit pinion bushing (labor only) | Call us | 32.81 |
| 532 | Replace TIMKEN cups + "C" clip | Call us | 36.75 |

MISCELLANEOUS

| | | Dealer Price | Retail Price |
|-----|--|--------------|--------------|
| 606 | REFACE & polish 4 rocker arms | Call us | 63.00 |
| 609 | REBUSH & align hone 4 rocker arms (labor only) | Call us | 76.13 |
| 610 | HONE & fit 4 oversize tappets | Call us | 81.25 |
| 611 | REPLACE, HONE & FIT transmission main shaft bushing (labor only) | Call us | 59.06 |