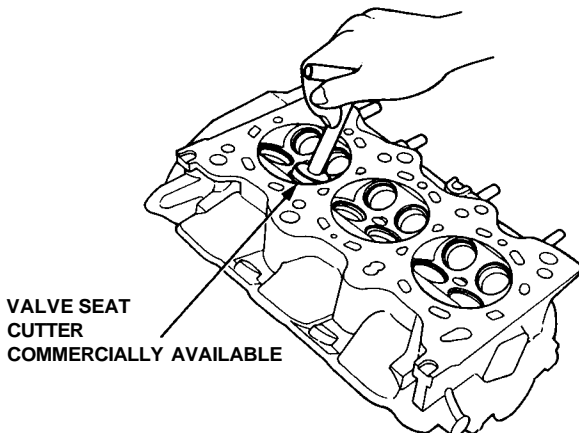


Valve Seats

Reconditioning

1. Renew the valve seats in the cylinder head using a valve seat cutter.

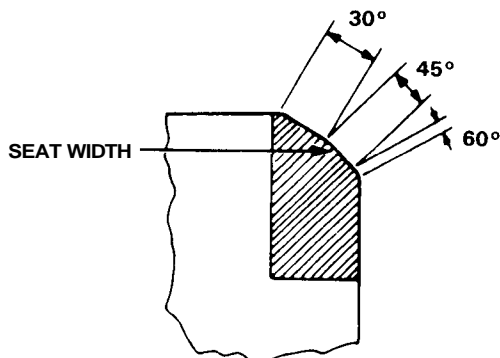
NOTE: If guides are worn (see page 6-19), replace them (see page 6-21) before cutting the valve seats.



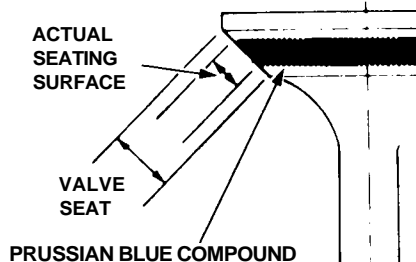
2. Carefully cut a 45° seat, removing only enough material to ensure a smooth and concentric seat.
3. Bevel the upper edge of the seat with the 30° cutter and the lower edge of the seat with the 60° cutter. Check width of seat and adjust accordingly.
4. Make one more very light pass with the 45° cutter to remove any possible burrs caused by the other cutters.

Valve Seat Width:

Standard:	Intake	1.25 — 1.55mm (0.049 — 0.061 in)
	Exhaust	1.25 — 1.55 mm (0.049 — 0.061 in)
Service Limit:	Intake	2.0 mm (0.08 in)
	Exhaust	2.0 mm (0.08 in)



5. After resurfacing the seat, inspect for even valve seating: Apply Prussian Blue compound to the valve face, and insert valve in original location in the head, then lift and snap it closed against the seat several times.



6. The actual valve seating surface, as shown by the blue compound, should be centered on the seat.
 - If it is too high (closer to the valve stem), you must make a second cut with the 60° cutter to move it down, then one more cut with the 45° cutter to restore seat width.
 - If it is too low (closer to the valve edge), you must make a second cut with the 30° cutter to move it up, then one more cut with the 45° cutter to restore seat width.

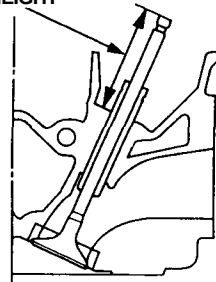
NOTE: The final cut should always be made with the 45° cutter.

7. Insert intake and exhaust valves in the head and measure valve stem installed height.

Valve Stem Installed Height:

Standard (New):	Intake	46.935 — 47.425 mm (1.8478 — 1.8671 in)
	Exhaust	47.885 — 48.375 mm (1.8852 — 1.9045 in)
Service Limit:	Intake	47.625 mm (1.8750 in)
	Exhaust	48.575 mm (1.9124 in)

VALVE STEM INSTALLED HEIGHT



8. If valve stem installed height is over the service limit, replace valve and recheck. If still over the service limit, replace cylinder head; the valve seat in the head is too deep.