

# Table of Contents

**IH: Engine Mechanicals - Sub-03E** ..... 3  
**Three angle valve seats - FLT/FL/FX/XL models** ..... 3



[Go To Technical Menu](#)

## IH: Engine Mechanicals - Sub-03E

### Three angle valve seats - FLT/FL/FX/XL models

- The MoCo issued a bulletin in June of 1980 stating that all 1980 production models incorporate three angle valve seats on the (intake and exhaust) ports on the new -80 heads. <sup>1)</sup>
- In April of 1981, this was reiterated for XL Models starting with crankcase (781012001) with the introduction of new heads for the 81 model year, <sup>2)</sup> which were available as replacement for previous year models.
- There are specific procedures that must be followed when cutting this type of valve seat. Always be sure to reface the valves before you cut the seats. A Neway Valve Seat Cutter (444-HDF) or other quality equipment is recommended for this.
- Follow the procedures outlined in the service manual for removing and re-facing valves and guides and decarbonizing the combustion chamber.
  1. Cut the 46° seat angle first. Cut only enough to clean up the seat.
  2. Apply bluing to the valve and install the valve in the head. Rotate the valve against seat. Remove the valve and check the contact pattern. The valve seat should be 1/16" wide and centered on the valve.
  3. If the valve seat pattern is too close to the stem side of the valve face, cut a 60° angle to raise the seat. If the pattern is too close to the edge of the valve face, cut a 31 ° angle to lower seat.
  4. After cutting the 31° and / or 60° angles to position the seat, final cut the 46° seat angle to obtain the proper 1/16" width.
  5. Recheck the valve seat width and location with bluing as described in Step 1.
  6. When reassembling, follow the inspection and assembly instructions found in the 1980 service manuals to insure the proper valve seat height, valve guide installation and valve spring length / tension.

[Go To Technical Menu](#)<sup>1)</sup>

HD Service Bulletin #M-782 dated June 3, 1980

<sup>2)</sup>

HD Service Bulletin #M-827 dated April 24, 1981

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