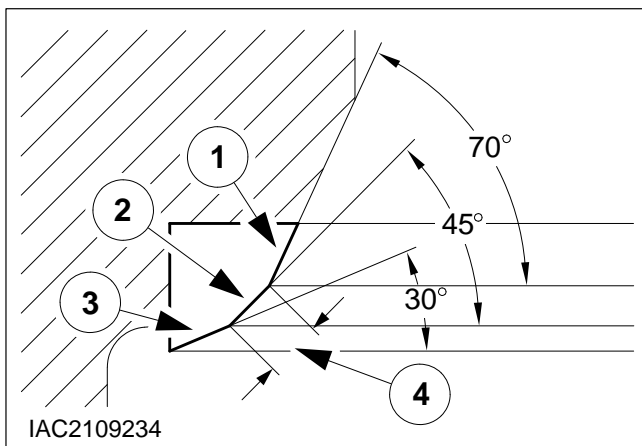


Valve Seat (one) (valve removed) (21 231 9)

Proprietary Tools

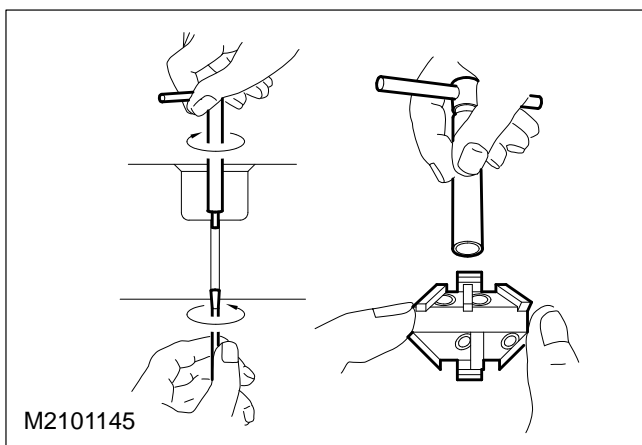
Valve seat mill (locked in valve guide)
Mill 25°, 45° and 70°



Re-machine

1. Locations of the angles on the valve seat.

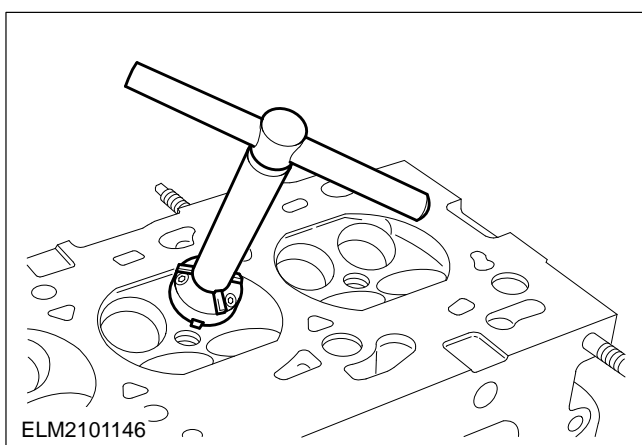
- 1 Upper correction angle
- 2 Valve seat angle
- 3 Lower correction angle
- 4 Valve seat width



NOTE: Use only tools which fit in the valve guide without side play.

NOTE: Procedure shown with proprietary tool. Follow tool manufacturer's operating instructions.

2. Insert guide mandrel in valve guide and tighten.
3. Place handle on the valve seat mill.



NOTE: Avoid chatter marks.

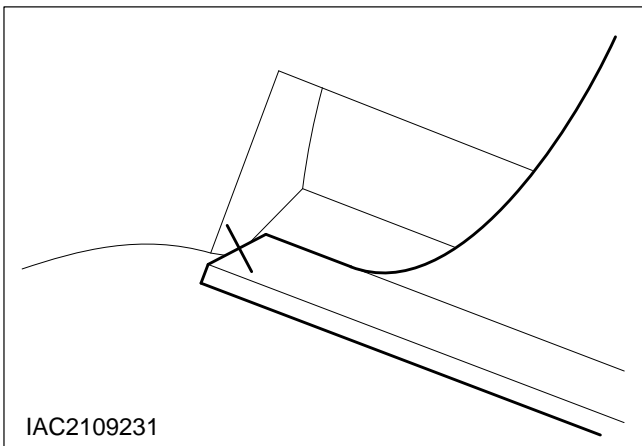
4. Milling process.

NOTE: Do not remove more than 0,1 mm of material, otherwise the cylinder head will have to be renewed.

- Place 45° mill with handle on the guide mandrel and turn clockwise uniformly with light pressure of about 2 kg.
- Repeat this procedure until a uniform seat face is produced.

5. Check valve seat width and valve seating.

- Make four pencil marks distributed uniformly on the valve seat insert.
- Insert valves and turn 90°.
- The smudging of the pencil marks can be used to determine the valve seat width, the location of the valve seat face on the valve and the uniformity of the mating face.
- If necessary, repeat the milling procedure.



6. Correct the position and width of the valve seat face.

NOTE: The seat face of the valve should lie centrally on the seat face of the valve seat insert.

- The seat width and the position of the mating face can be modified by machining the correction angle (see step 1.).
- By machining the lower correction angle (25°) the valve seat face is made smaller and displaced in the direction of the valve stem.
- Milling the upper correction angle (70°) makes the valve seat face smaller and displaces it in the direction of the valve head.