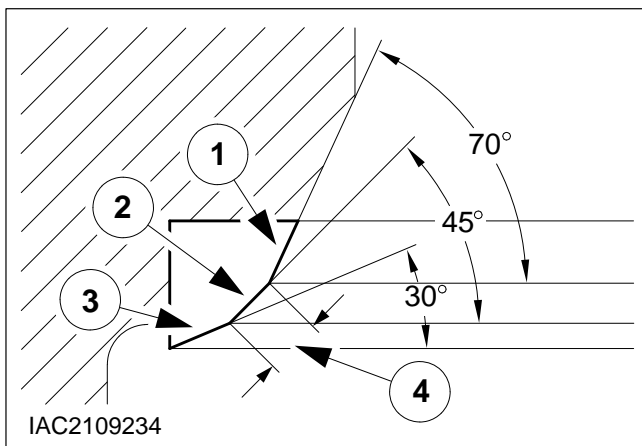


Valve Seat - Cut (one) (valve removed) (21 231 9)

Proprietary Tools

Valve seat cutter (stopped in valve guide)
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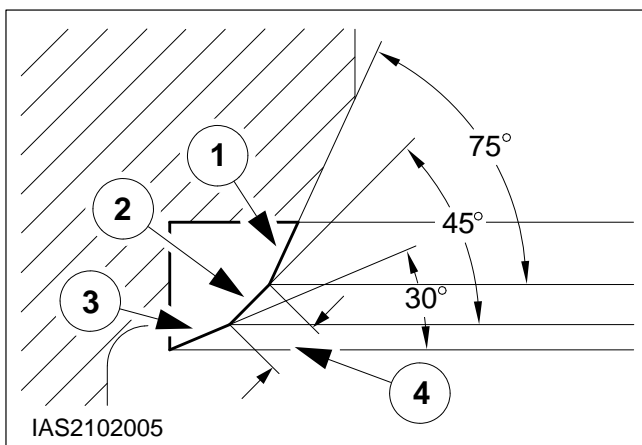
Cutters, 30°, 45°, 70° and 75°



Rework

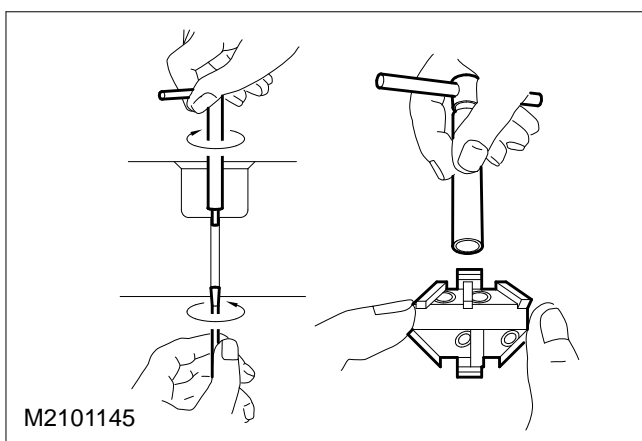
1. Position of the angles on the valve seat ring (exhaust valve).

- 1 Upper correction angle (70°)
- 2 Valve seat angle (45°)
- 3 Lower correction angle (30°)
- 4 Valve seat width



2. Position of the angles on the valve seat ring (inlet valve).

- 1 Upper correction angle (75°)
- 2 Valve seat angle (45°)
- 3 Lower correction angle (30°)
- 4 Valve seat width

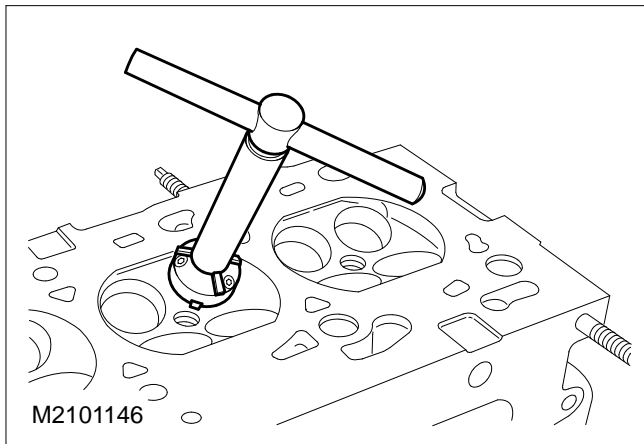


NOTE: Only use tools which locate securely in the valve guide.

NOTE: The procedure is shown using a proprietary tool. Follow the instructions of the tool manufacturer.

3. Insert the locating pin in the valve guide and tighten.

4. Put the twist grip onto the valve seat cutter.



NOTE: Avoid chatter marks.

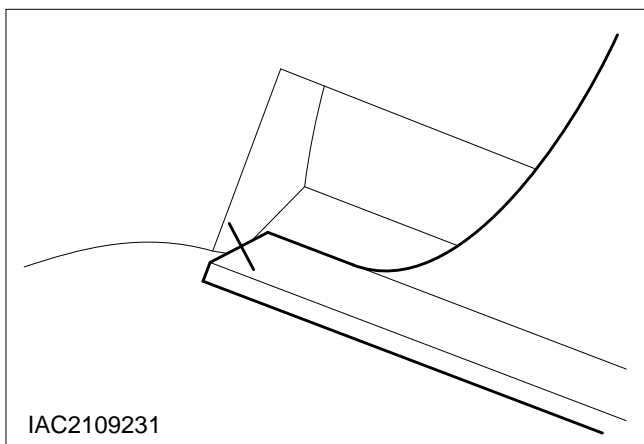
5. Cutting procedure.

NOTE: Do not remove more than 0,1 mm of material. Otherwise, the cylinder head must be renewed.

- Put the 45° cutter with twist grip onto the locating pin and turn evenly in clockwise direction with light pressure of about 2 kg.
- Repeat this procedure until an even seat surface is produced.

6. Check the valve seat width and contact.

- Mark the valve seat ring with a pencil at four equal intervals around the circumference .
- Insert the valve and turn it through 90° .
- The valve seat width, the position of the valve seat surface on the valve and the evenness of the contact surface can be determined from the spread of the pencil marks.
- Repeat the cutting procedure if necessary.



7. Correct the position and width of the valve seat surface.

NOTE: The valve seat surface should lie centrally on the seating surface of the valve seat ring.

- The valve seat width and the position of the valve seat surface can be changed by cutting the correction angles as in sub-operation 1.
- By cutting the lower correction angle (30°), the valve seat surface is reduced and moved in the direction of the valve stem.
- By recutting the upper correction angle (70° or 75°), the valve seat surface is reduced and moved in the direction of the valve head.