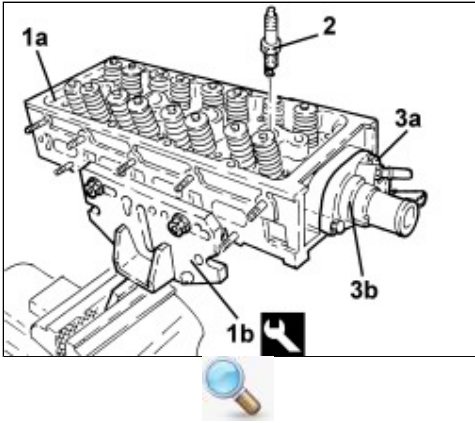




Removing ([Refitting](#))

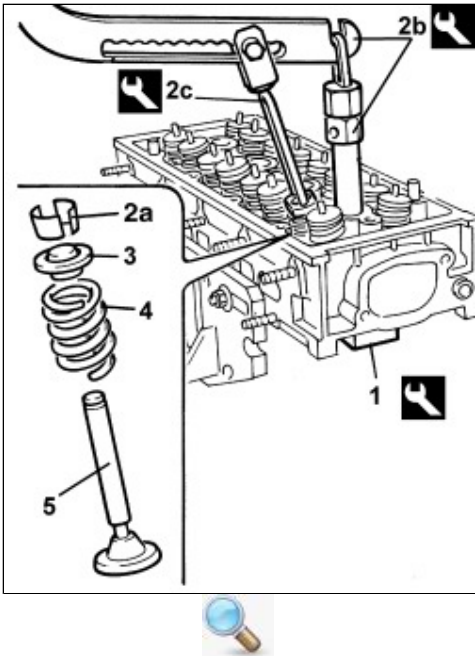
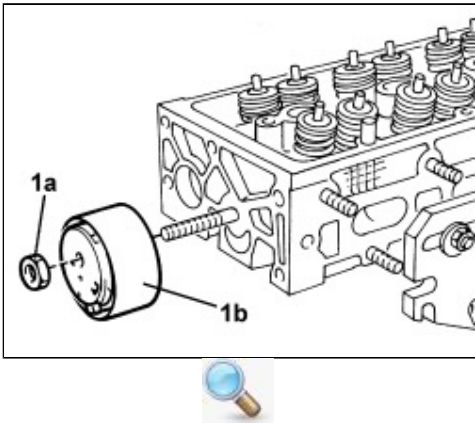
1. Position the cylinder head (1a) in the vice, supporting it using the support tool (1b).

Tool	Description	Function	Validity
1860470000	Mount	Cylinder head overhaul	1.4 Turbo Petrol

2. Unscrew the spark plugs and remove them.

3. Undo the screws (3a) and remove the thermostat (3b) complete with O-ring.

1. Undo nut (1a) and remove timing belt moving tensioner (1b).



1. Fit the valve retaining tool beneath the cylinder head.

Tool	Description	Function	Validity
1860786000	Base	Valve retention	1.4 Turbo Petrol

2. Remove half-cones (2a) using tools (2b) and (2c).

Tool	Description	Function	Validity
1860644000	Lever	Removing/ refitting valves	1.4 Turbo Petrol
Tool	Description	Function	Validity
1870890000	Chamber	Dismantling valves	1.4 Turbo Petrol

3. Remove the upper valve shims.

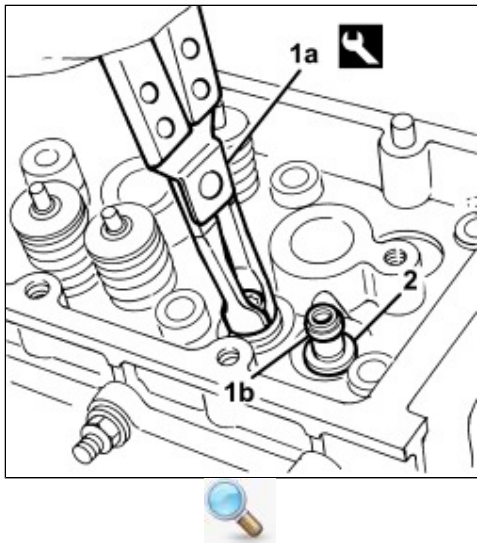
4. Remove the valve springs.

5. Remove the valves.

1. Use the tool (1a) to remove oil seal rings (1b) from the valve guides.

Tool	Description	Function	Validity
1870894000	Extractor	Valve guide oil seal extraction	1.4 Turbo Petrol

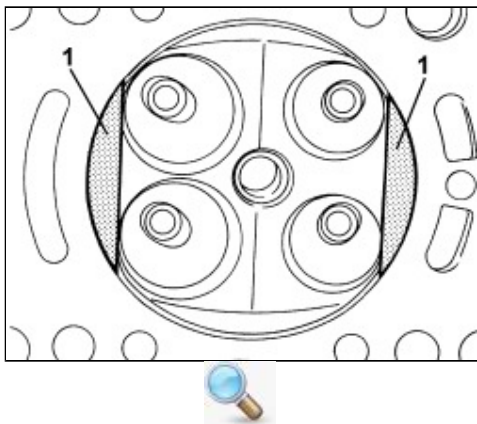
2. Remove the lower valve shims.



- Remove the valve retaining tool and keep the valves.
- Loosen the vice, remove the cylinder head and place it on the bench.
- Remove the cylinder head support tool.

[Op. 1016E14 VALVE GUIDES FOR SINGLE CYLINDER HEAD - REPLACE DURING OP.1016E10](#)

Refitting ([Removing](#))



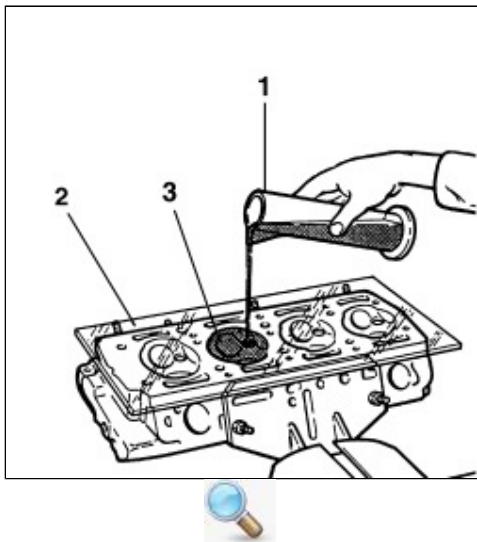
- Remove deposits and clean the valve seats and ducts.
- Clean any traces of the old gasket from the cylinder head lower surface.
- Check that the cylinder head surface flatness is within the prescribed values.

Size	Value	Validity
Engine cylinder head lower surface flatness (mm)	< 0.1	1.4 Turbo Petrol

- If necessary, flatten the lower cylinder head surface; it is permitted to remove 0.1 mm of material from the minimum cylinder head height (factory value).

Size	Value	Validity
Cylinder head height (factory value) (mm)	77	1.4 Turbo Petrol

1. Check that the levelling has not changed any of the combustion chambers in the areas; otherwise the head must be replaced.
- Also check all the combustion chambers as follows:



1. Fit the valves and spark plugs provisionally. Take a graduated burette containing a known amount of engine oil.
 2. Rest a glass plate on the cylinder head with holes corresponding to the combustion chambers.
 3. Fill the combustion chamber completely, taking care not to pour oil outside the combustion chamber.
- Wait about 10 minutes to allow the oil to decant.
 - Measure the amount of oil remaining in the burette and then calculate the difference between this and the amount of oil used initially with the burette full. The difference is the volume of the chamber.
 - Check that this value is within the specified values; if it is not, replace the cylinder head.

Size	Value	Validity
Combustion chamber volume (cc)	14.30	1.4 Turbo Petrol

- Check that the valve stem does not show signs of grooves or seizing.
- Check that the diameter of the valve stems corresponds to the recommended figures; if not, replace the worn valves.

Size	Value	Validity
Intake valve stem diameter (mm)	5.982 ÷ 6.000	1.4 Turbo Petrol
Size	Value	Validity
Exhaust valve stem diameter (mm)	5.974 ÷ 5.992	1.4 Turbo Petrol

- Check that the diameter of the valve head corresponds to the prescribed figures; if not, replace the valves.

Size	Value	Validity
Intake valve outer diameter (mm)	26.75 ÷ 27.05	1.4 Turbo Petrol
Size	Value	Validity
Exhaust valve outer diameter (mm)	22.25 ÷ 22.55	1.4 Turbo Petrol

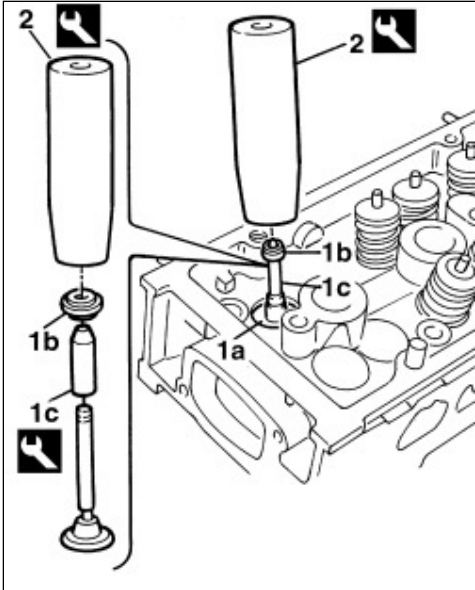
- Check that the inner diameter of the valve guide and the clearance between it and the valve are within specified values, otherwise replace the valve guide.

- If necessary, replace the valve guides, refer to

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Size	Value	Validity
Valve guide inner diameter (mm)	6.022 ÷ 6.040	1.4 Turbo Petrol
Size	Value	Validity
Intake valve/valve guide clearance (mm)	0.022 ÷ 0.058	1.4 Turbo Petrol
Size	Value	Validity
Exhaust valve/valve guide clearance (mm)	0.030 ÷ 0.066	1.4 Turbo Petrol

- Using the special instrument, check that the valve spring specifications are within the prescribed values; if this is not the case, replace the components that do not comply.



Size	Value	Validity
Valve spring height released (mm)	46.9	1.4 Turbo Petrol
Size	Value	Validity
Height of valve springs under a load of 14.9 - 16.5 daN (mm)	37.52	1.4 Turbo Petrol
Size	Value	Validity

Height of valve springs under a load of 31.1 - 34.1 daN (mm)	30.0	1.4 Turbo Petrol
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1. Fit the lower valve shims (1a); place the oil seal rings (1b) on the valve guides, placing the installing tool guide (1c) on the valve stem fitted provisionally in its seat, then fit a new oil seal ring on the installing tool.

2. Fit the oil seal ring in its housing using the fitting tool.

Tool	Description	Function	Validity
1860993000	Drift	Fitting valve guide oil sealing ring	1.4 Turbo Petrol

- Refit the valves, springs, upper shims and half-cones using the same equipment as for the dismantling.
- Position the timing belt moving tensioner in its housing and secure it without tightening the nut.
- Place the thermostat in its housing with the new O-ring and secure it by tightening the bolts to the recommended torque.

Component	Fastening	Ø	Value (daNm)	Validity
Thermostat	Screw	M6	0.9 ÷ 1.1	1.4 Turbo Petrol

- Fit the spark plugs and tighten them to the prescribed torque.

Component	Fastening	Ø	Value (daNm)	Validity
Spark plugs	-	M12	1.6 ÷ 2.0	

- Undo the nuts and remove the cylinder head from the support tool.