



*Technical Report #17*

*Report about replacement of valve stem seals*

## Informe Técnico

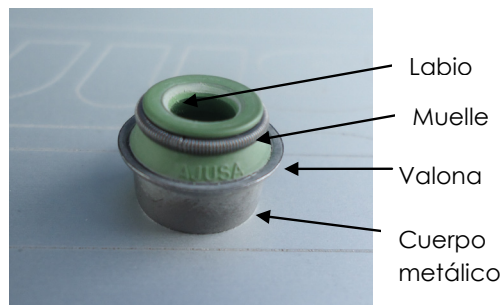
### Purpose

To report about how to replace valve stem seals in a disassembled cylinder head.

### Introduction

Valve stem seals guarantee sealing, preventing fuel to enter the cylinder from the valve guide.

The elastomer lip next to the closing spring is the one in charge of sealing the valve guide; the metal body (if the seal has one) function is to support the valve guide in the cylinder head.



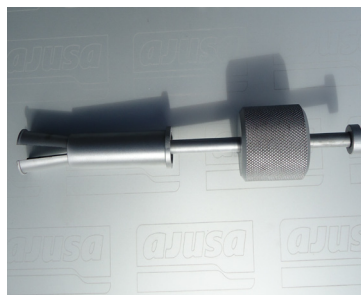
The main sign of a wrong performance of valve seals in an engine is a high oil consumption. Also, the combustion of this oil causes a white-bluish smoke out of the exhaust, therefore a high pollution to the outside.

### Procedure

To replace valve stem seals it is necessary to have the accurate toolings.



Spring compressor



Remover



Valve Seal Assembly Kit

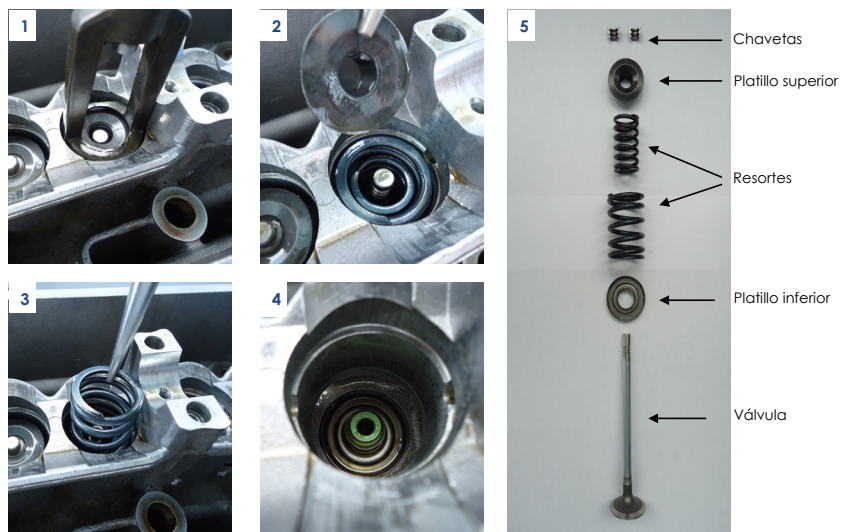
## Disassembly

Once the cylinder head has been disassembled from the engine, it is advisable to put it on a work bench which will allow us to perform all necessary operations to remove and replace valve seals.

- 1 First of all, place the spring compressor until the two parts of the retention pins of the valve are free and can be removed.



- 2 Decompress the spring and disassemble the set without changing the initial position; in this way, the valve seal to be removed can be accessed.

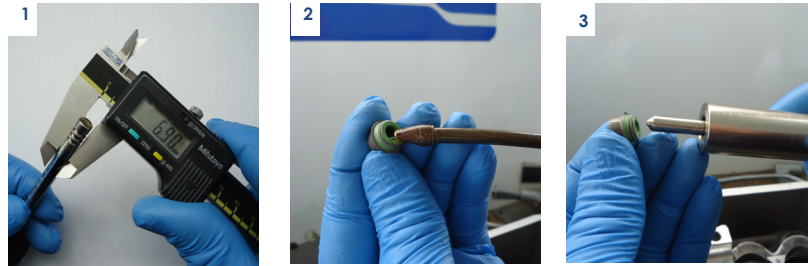


- 3 Place the remover taking the stem seal from the metal body and remove from its housing, hitting the seal with the tool to remove it from the head.

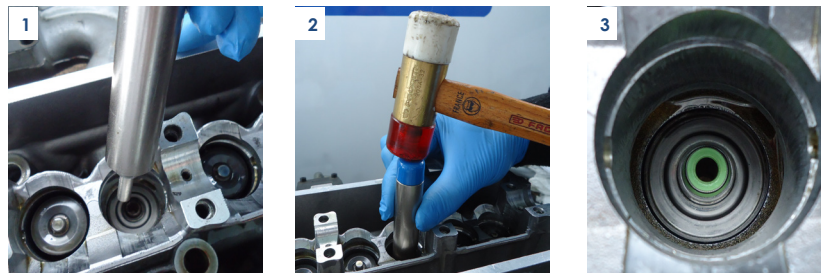


## Assembly

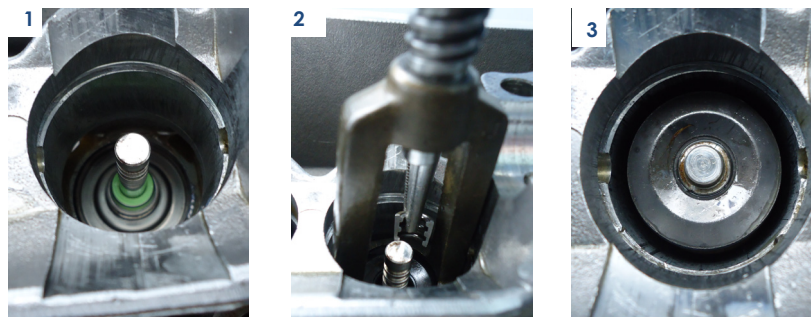
- 1** Place the new seal in the assembly tool to introduce it in its housing; we measure the valve guide and lube the seal before placing it.



- 2** Introduce the new valve seal. Make sure the housing is totally clean and hit the base of the tool until it is completely fixed.



- 3** Once the new seal has been installed, all the previous disassembled components must be installed respecting the positions of the different elements.



Make sure that the position of the retention pins is correct when the upper lip ascends, so the set will be well positioned.