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TECHNICAL REPORT

Replacement of valve stem
seals



PURPOSE

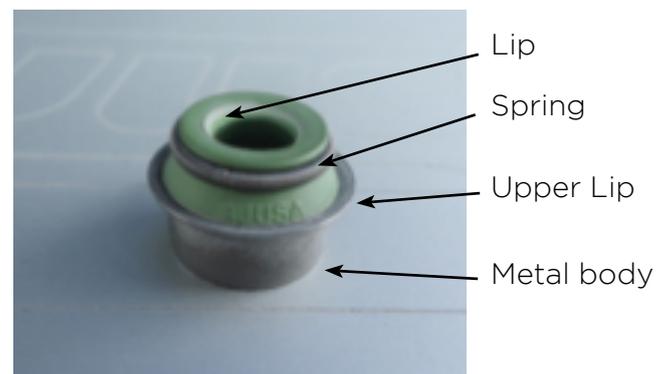
To report about **how to replace valve stem seals** in a disassembled cylinder head.

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

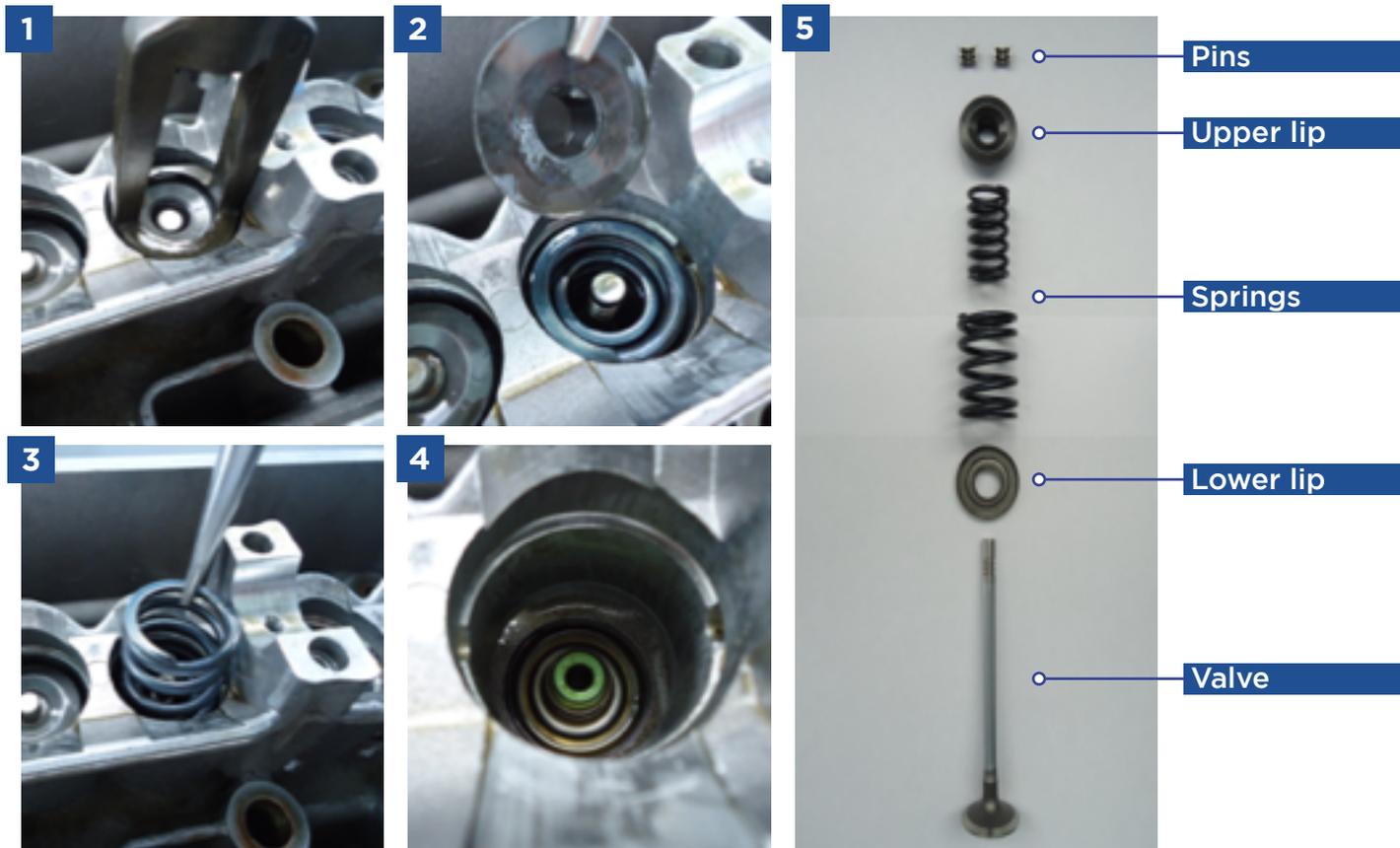
DISASSEMBLY

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.

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



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

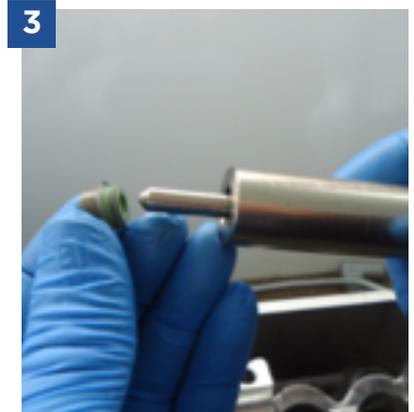


- ▶ Place the remover taking the stem seal from the metal body and remove from its housing, hitting the seal with the tool to remove it from the head.

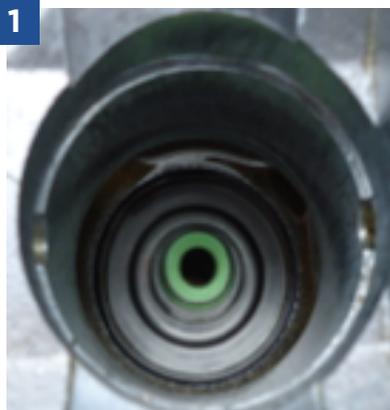


ASSEMBLY

- 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.



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



- 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.