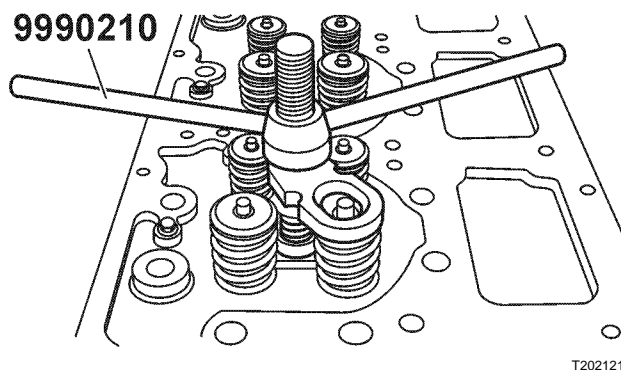


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Valves, Remove and Install  
Cylinder head removed  
D16F

## Valves, Remove and Install Cylinder head removed



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**Note:** Information is subject to change without notice.  
Illustrations are used for reference only and may differ slightly from the actual vehicle being serviced. However, key components addressed in this information are represented as accurately as possible.

## 2140-19-05-01

### Valves, Remove and Install

Cylinder head removed

You must read and understand the precautions and guidelines in Service Information, group 20, "General Safety Practices, Engine" before performing this procedure. If you are not properly trained and certified in this procedure, ask your supervisor for training before you perform it.

*Special tools: 88800151, 9990210*

#### Removal

1

#### CAUTION

Valves and valve seats cannot be machined. They should be replaced if either are found to be defective.

Clean the cylinder head.  
Mark the valves if they are to be re-used.

2

Insert the valve spring compressor into the unit injector location.

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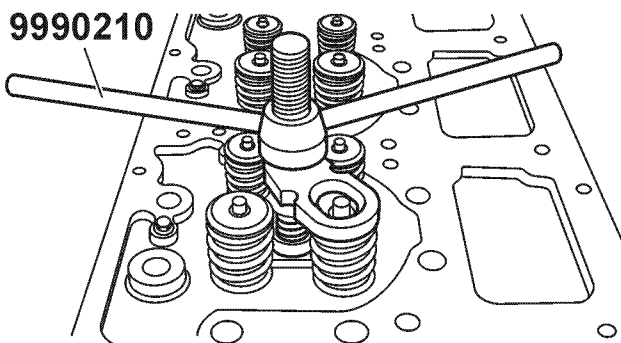
3

#### WARNING

Use protective goggles or injury to the eyes can occur.

Press down the valve spring. Gently tap the spring plate with a plastic or rubber hammer.

Remove the valve stem keepers and the valve spring.



T2021211

4

Remove the valve stem seals and the valve.

### Installation

**5**

Install new valve.

**Note:** Oil the valve stem.

**6**

Using a clean cloth, thoroughly clean all engine oil off the valve stem and valve guide.

**7**

Position the new valve stem seal onto the valve stem.

**Note:** The valve stem seals must be dry when fitted.

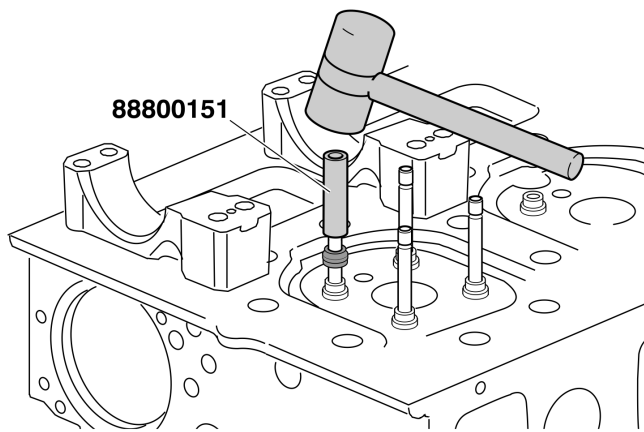
**8**

Use tool 888800151 to install the valve stem seal onto the valve guide.

**Note:** The tool is designed to fit different engines and can therefore be turned round.

Use a plastic or rubber hammer so that the tool will not be damaged.

**Note:** Ensure that the valve stem seal is pushed all the way down, so that the bottom of the seal is in contact with the surrounding valve guide.



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888800151

**9**

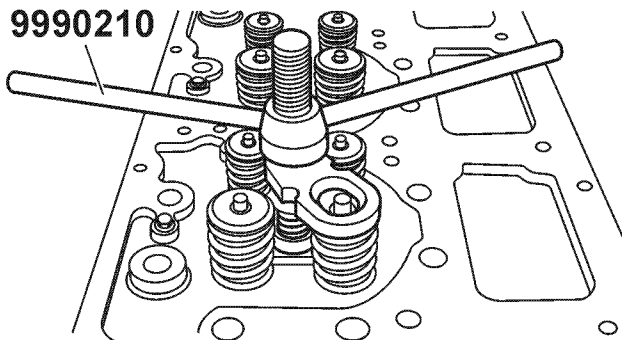


### WARNING

Use protective goggles or injury to the eyes can occur.

Using a plastic or rubber hammer, install the valve spring and keepers. Carefully position the valve keepers in their correct positions.

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**10**

Visually inspect the keepers to ensure that they are properly installed.

**11**

Repeat the procedure with the next valve.