



Valve Spring, Retainer, and Seal

Special Tool(s)

 ST1330-A	Compressor, Valve Spring 303-581 (T97T-6565-A)
 ST1824-A	Installer, Valve Stem Oil Seal 303-370 (T90T-6571-A)

Material

Item	Specification
Motorcraft® SAE 5W-30 Premium Synthetic Blend Motor Oil XO-5W30-QSP (US); Motorcraft® SAE 5W-30 Super Premium Motor Oil CXO-5W30-LSP12 (Canada); or equivalent	WSS-M2C929-A

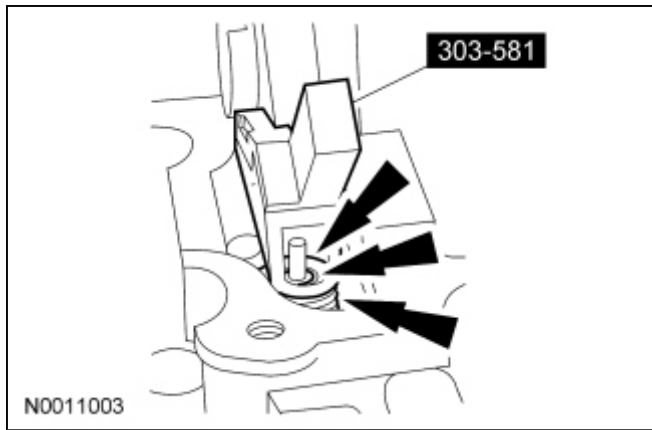
Removal

1. Remove the spark plugs. For additional information, refer to [Section 303-07A](#).
2. Remove the camshaft roller followers. For additional information, refer to [Camshaft Roller Follower](#) in this section.
3. Position the piston of the cylinder being serviced at Top Dead Center (TDC).
4. **NOTICE:** If air pressure has forced the piston to the bottom of the cylinder, any loss of air pressure will allow the valve to fall into the cylinder. If air pressure must be removed, support the valve prior to removal.

Hold the valves in the cylinder head.

- Use a suitable tool to apply air pressure to the cylinder.

5. Using the Valve Spring Compressor, remove the valve spring retainer keys, valve spring retainers and the valve springs.

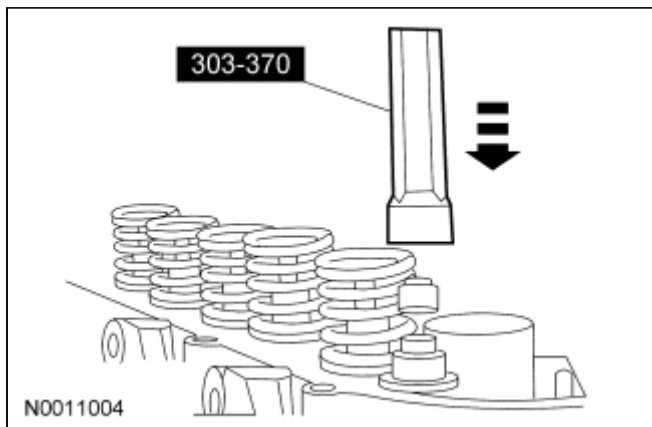


6. Remove the valve seals.

Installation

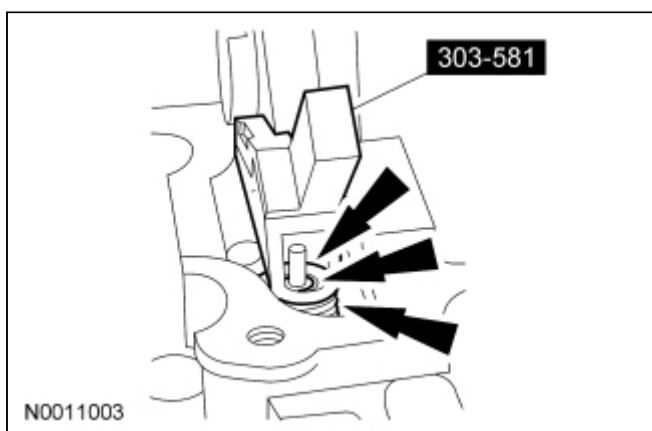
1. **NOTE:** Lubricate the valve seals with clean engine oil.

Using the Valve Stem Oil Seal Installer, install the valve seal.



2. **NOTE:** Lubricate the valve springs, retainers and retainer keys with clean engine oil.

Using the Valve Spring Compressor, install the valve springs the valve spring retainers and the valve spring retainer keys.



3. Install the camshaft roller followers. For additional information, refer to [Camshaft Roller Follower](#) in this section.
4. Install the spark plugs. For additional information, refer to [Section 303-07A](#).

