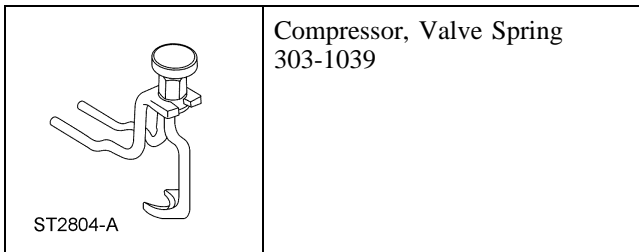


IN-VEHICLE REPAIR

Valve Springs

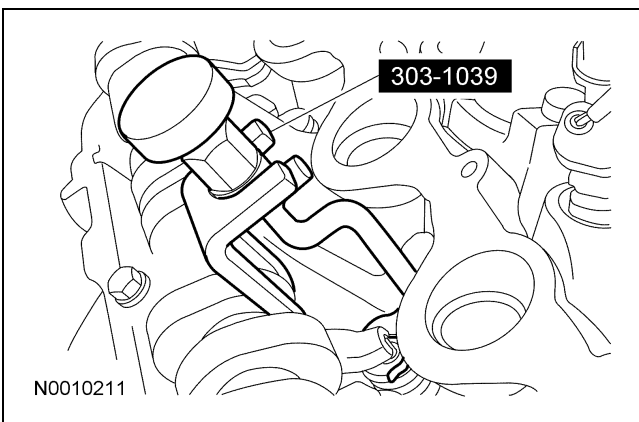
Special Tool(s)



Removal

- Depending on the valve spring being serviced, remove the LH or RH valve cover. For additional information, refer to Valve Cover — LH or Valve Cover — RH in this section.
- Remove the spark plug. For additional information, refer to Section 303-07B.
- Rotate the crankshaft until the piston for the valve spring being serviced is at the top of its stroke with the intake valve and the exhaust valves closed.
- ⚠ CAUTION: If the components are to be reinstalled, they must be installed in the same positions. Mark the components for installation into their original locations.**

Using the special tool, compress the valve spring and remove the camshaft roller follower.

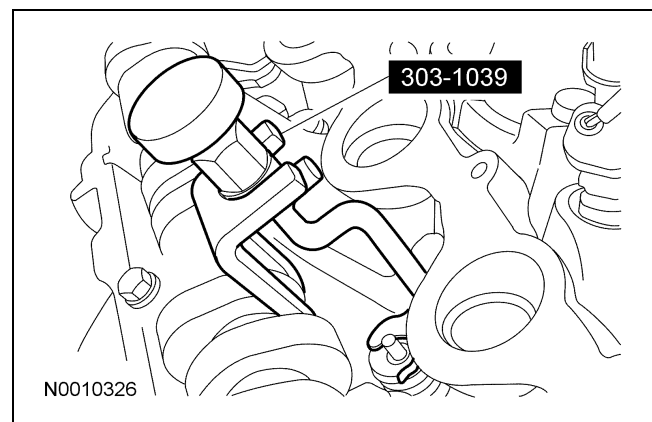


- Use compressed air in the cylinder to hold both valves in position.
 - Apply a minimum of 965 kPa (140 psi) of compressed air into the cylinder.

- ⚠ CAUTION: 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.**

⚠ CAUTION: If the components are to be reinstalled, they must be installed in the same positions. Mark the components for locations.

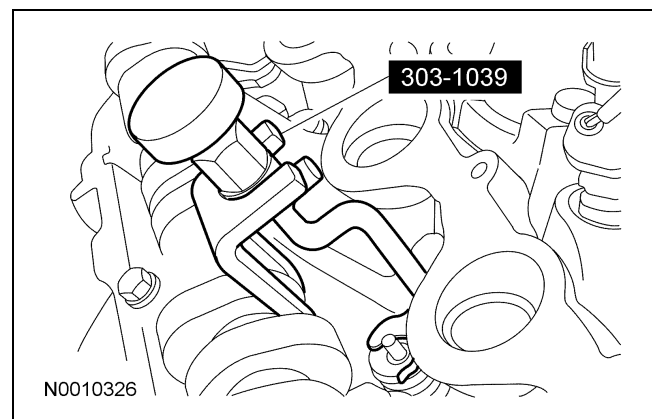
Using the special tool, compress the valve spring and remove the valve spring retainer keys.




- Remove the valve spring retainer and the valve spring.
- Inspect the valve spring. For additional information, refer to Section 303-00.

Installation

- Using the special tool, install the valve spring, the valve spring retainer and the valve spring retainer keys.



IN-VEHICLE REPAIR (Continued)

2. Relieve the air pressure from the cylinder.
3.  **CAUTION: If the components are to be reinstalled, they must be installed in the same positions. Mark the components for installation into their original locations.**

Using the special tool, compress the valve spring and install the camshaft roller follower.

4. Install the spark plug. For additional information, refer to Section 303-07B.
5. Depending on the valve spring being serviced, install the LH or RH valve cover. For additional information, refer to Valve Cover — LH or Valve Cover — RH in this section.

