
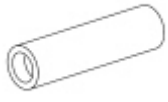


Cylinder Head

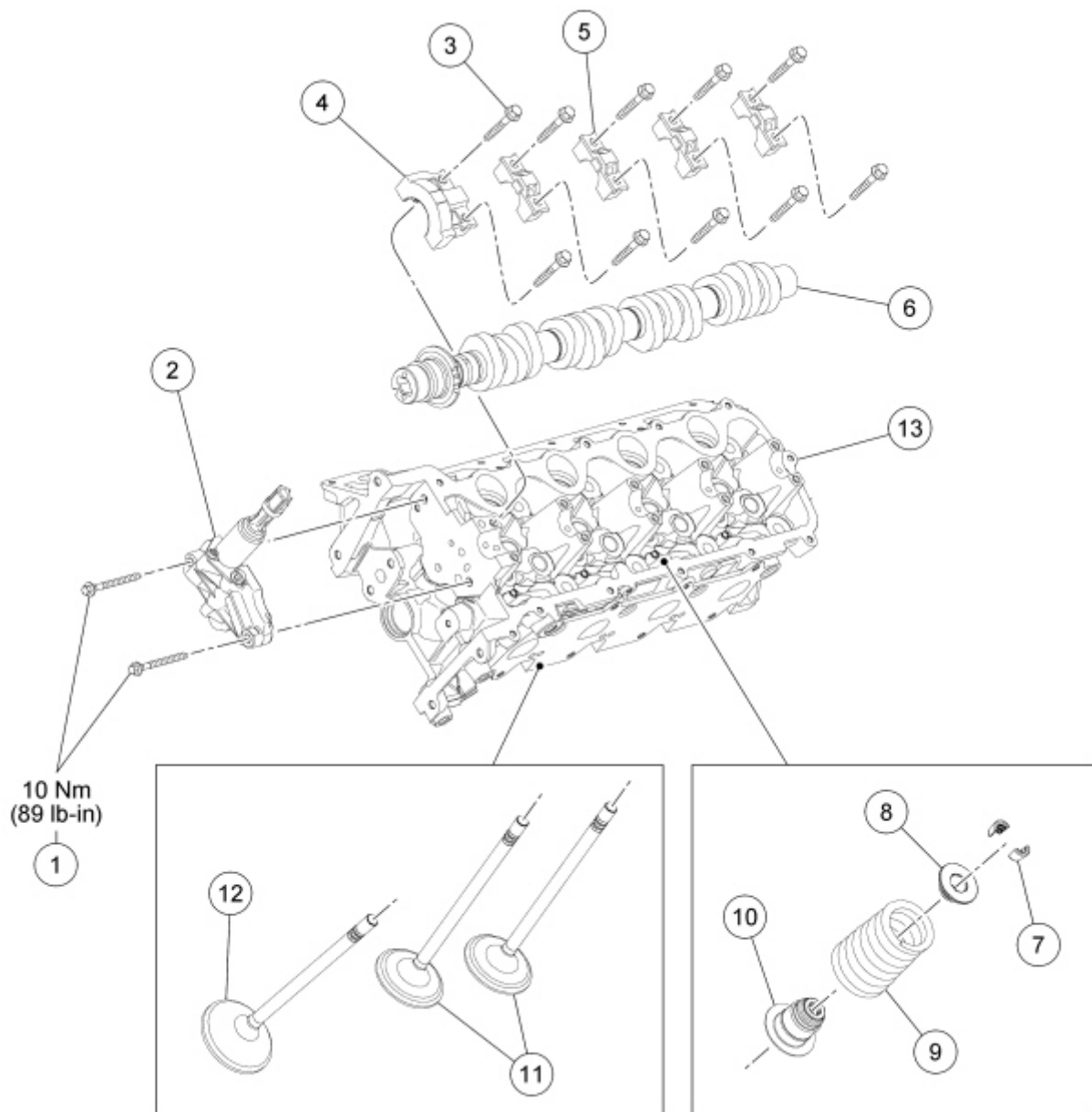
Special Tool(s)

 <p>ST2804-A</p>	Compressor, Valve Spring 303-1039
 <p>ST1332-A</p>	Installer, Valve Stem Oil Seal 303-383 (T91T-6571-A)

Material

Item	Specification
Motorcraft® SAE 5W-20 Premium Synthetic Blend Motor Oil XO-5W20-QSP (US); Motorcraft® SAE 5W-20 Super Premium Motor Oil CXO-5W20-LSP12 (Canada); or equivalent	WSS-M2C930-A

NOTE: LH side shown, RH side similar.



N0070935

Item	Part Number	Description
1	W701520	Variable Camshaft Timing (VCT) housing assembly bolts (2 required)
2	6C261 LH/ 6C260 RH	VCT housing assembly
3	N807834	Camshaft bearing cap bolt (10 required)
4	6B284	Camshaft front bearing cap
5	6B280	Camshaft bearing cap (4 required)
6	6C255 LH/ 6251 RH	Camshaft
7	6518	Valve spring retainer key (24 required)
8	6514	Valve spring retainer (12 required)
9	6513	Valve spring (12 required)
10	6A517	Valve seal (12 required)
11	6507	Intake valves (8 required)
12	6505	Exhaust valve (4 required)

13	6050 LH/ 6049 RH	Cylinder head
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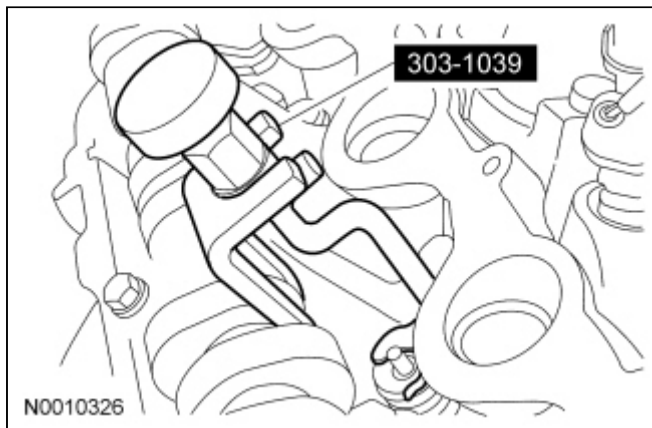
Disassembly

1. Remove the bolts and the Variable Camshaft Timing (VCT) housing.
 - Discard the gasket.
2. Lubricate the camshaft and camshaft journals with clean engine oil and install the camshaft.
3. **NOTE:** The camshaft must be installed in the head to use the Valve Spring Compressor to compress the valve springs.

NOTE: Lubricate the camshaft bearing caps with clean engine oil.

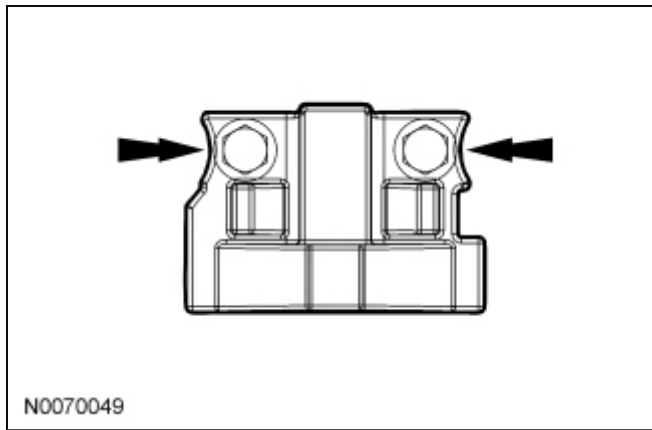
Install the camshaft bearing caps in their original locations.

- Position the front camshaft bearing cap.
 - Position the remaining camshaft bearing caps.
 - Install the bolts finger-tight.
4. Using the Valve Spring Compressor, compress the valve spring and remove the valve spring retainer keys.



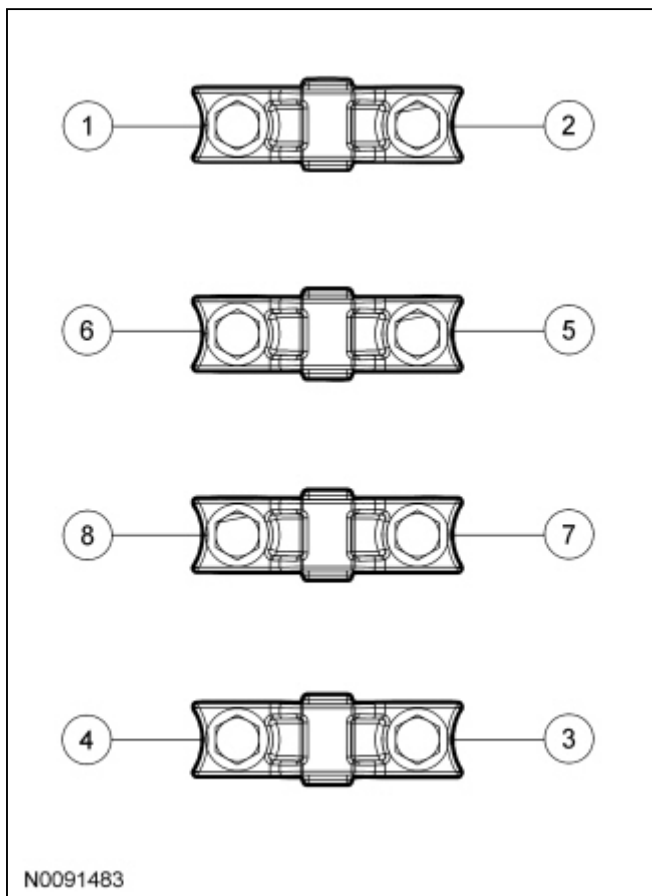
5. Remove the valve spring retainer, the valve spring and the valve seal.
 - Discard the valve seal.
6. Remove the valve from the cylinder head.
7. Repeat the previous 3 steps for each valve.
8. Inspect the components. For additional information, refer to [Section 303-00](#).
9. **NOTICE:** Remove the front thrust camshaft bearing cap straight upward from the bearing towers or the bearing cap may be damaged from side loading.

Remove the 2 bolts and the cylinder head camshaft front bearing cap.



10. **NOTICE:** The camshaft bearing caps must be installed in their original locations. Record camshaft bearing cap locations. Failure to follow these instructions may result in engine damage.

Remove the remaining bolts in the sequence shown and remove the cylinder head camshaft bearing caps.



11. Remove the camshaft.
12. Check the cylinder head for distortion. For additional information, refer to [Section 303-00](#).

Assembly

1. Lubricate the camshaft and camshaft journals with clean engine oil and install the camshaft.
2. **NOTE:** Lubricate the camshaft bearing caps with clean engine oil.

Install the camshaft bearing caps in their original locations.

- Position the front camshaft bearing cap.

- Position the remaining camshaft bearing caps.
- Install the bolts finger-tight.

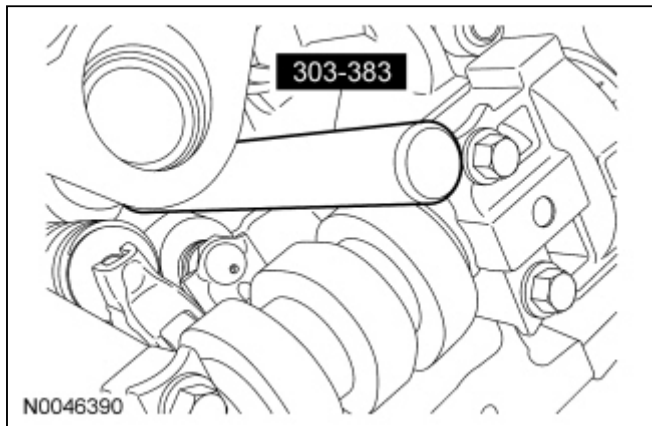
3. **NOTE:** Lubricate the valve stem with clean engine oil prior to installation.

Install the valve into the cylinder head.

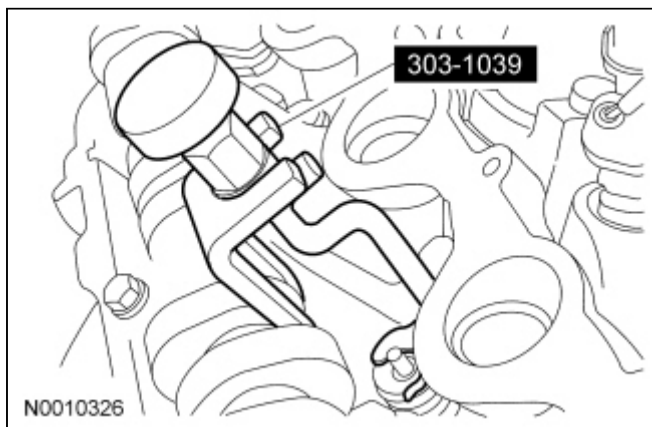
4. **NOTE:** Lubricate the valve seal and valve stem with clean engine oil prior to installation.

Position a new valve seal onto the valve stem.

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



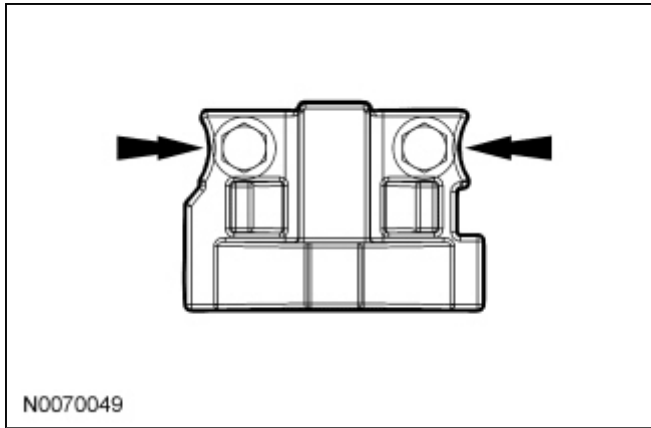
6. Using the Valve Spring Compressor, install the valve spring, the valve spring retainer and the valve spring retainer keys.



7. Repeat the previous 2 steps for each valve.

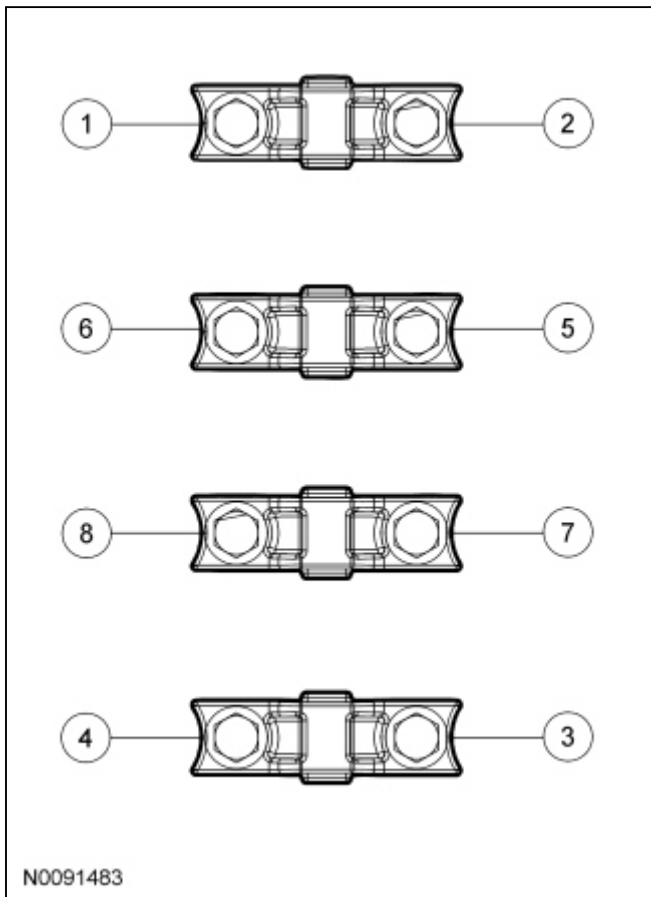
8. **NOTICE:** Remove the front thrust camshaft bearing cap straight upward from the bearing towers or the bearing cap may be damaged from side loading.

Remove the 2 bolts and the cylinder head camshaft front bearing cap.



9. **NOTICE:** The camshaft bearing caps must be installed in their original locations. Record camshaft bearing cap locations. Failure to follow these instructions may result in engine damage.

Remove the remaining bolts in the sequence shown and remove the cylinder head camshaft bearing caps.



10. Remove the camshaft.
11. Install a new gasket, the [VCT](#) housing and the bolts.
- Tighten to 10 Nm (89 lb-in).
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