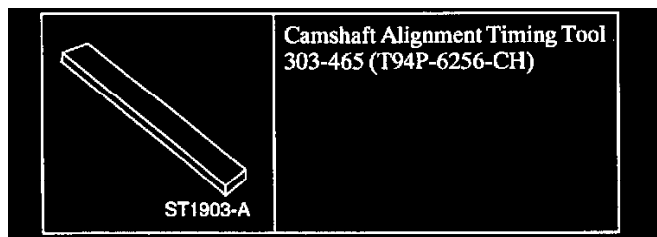


## Camshaft: Service and Repair

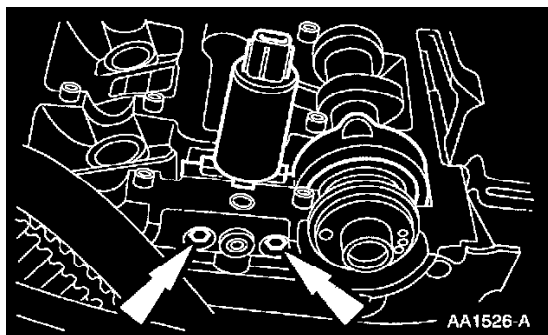
**NOTE:** Ford does not provide camshaft gear timing marks, or information to perform timing belt service without the special tools shown in this procedure.



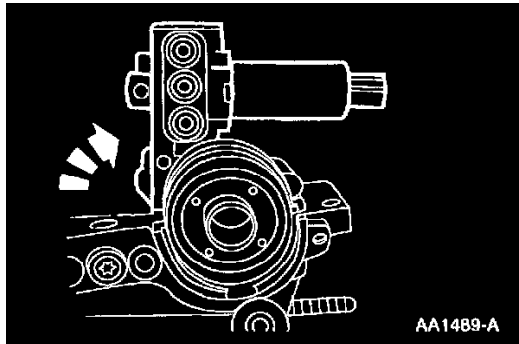
### Special Tools

#### Removal

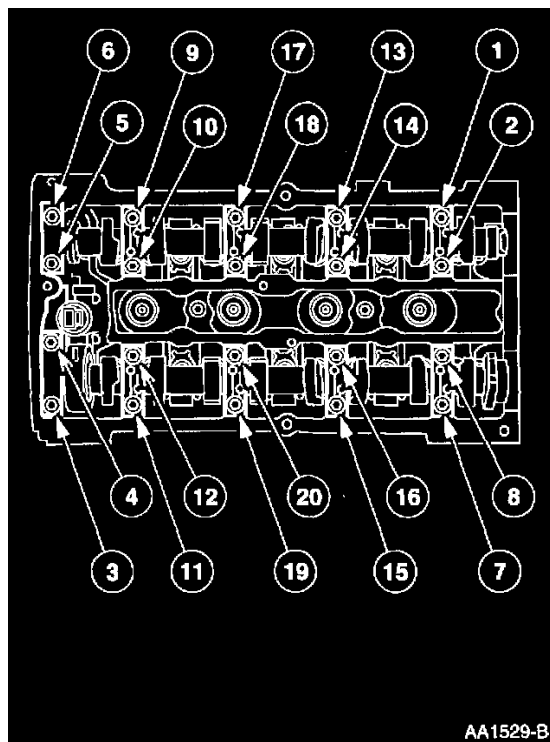
1. Remove the timing belt, valve cover and the camshaft sprocket.



2. Remove the bolts.



3. Rotate the flange **90 degrees** prior to removing the exhaust camshaft.



AA1529-B

4. **CAUTION:** Cylinder head camshaft journal caps should be numbered to make sure that they are assembled in their original positions. Failure to do so may result in engine damage.

Remove the camshaft journal caps.

^ Loosen the bolts in several two-turn passes in the sequence shown.

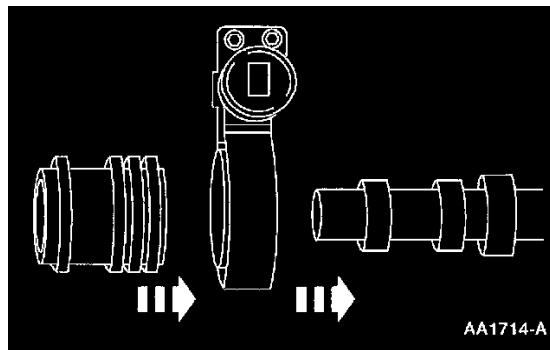
^ Remove the bolts.

^ Remove the caps.

5. Remove the camshafts.
6. Remove the oil control solenoid and bushing.
7. Inspect the camshafts for wear.

### Installation

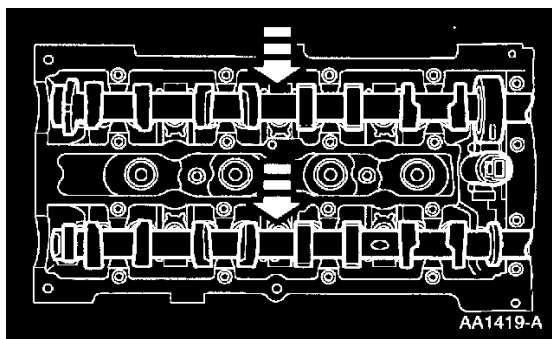
1. Verify the valve clearance.



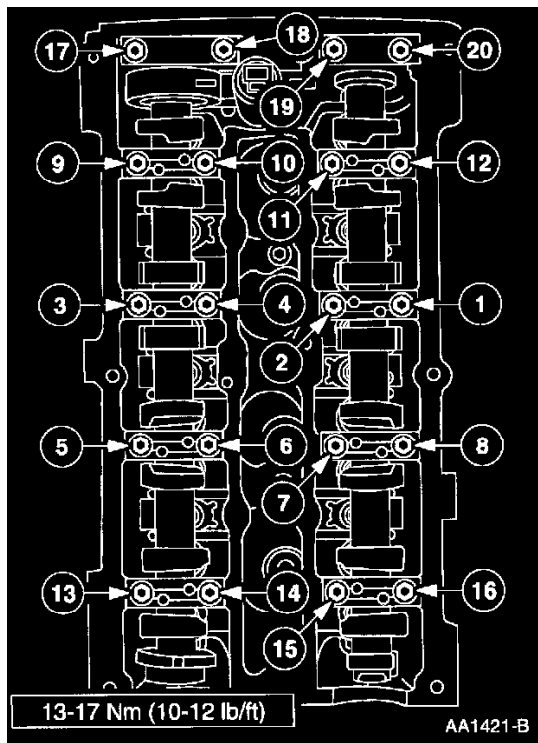
AA1714-A

2. Install the oil control solenoid bushing and flange on the exhaust camshaft.
3. **Note:** The front camshaft journal cap must be installed and the bolts tightened to specification within four minutes of sealer application or oil leaks may occur.

Coat the sealing surface of the front camshaft journal cap with Gasket Maker F8AZ-19B508-AB or equivalent meeting Ford specification WSK-M2G348-A5.



4. Position the camshafts.
5. Lubricate the camshaft bearing surfaces with Super Premium SAE 5W30 Motor Oil X0-5W30-QSP or equivalent meeting Ford specification WSS-M2C153-G.
6. Install new camshaft front oil seals.



7. **Note:** Apply a thin coat of Silicone Gasket and Sealant F7AZ-19554-EA or equivalent meeting Ford specification WSE-M4G323-A4 to the sealing surface of the front camshaft bearing cap.

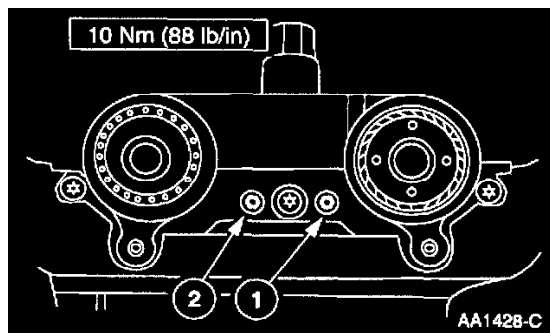
Install the camshaft journal caps.

^ Position the camshaft journal caps.

^ Install the bolts. Tighten the bolts in several two-turn passes in the sequence shown until snug.

8. **CAUTION:** The oil control O-ring seals must not fall out of position in the oil control solenoid flange during installation or poor engine performance may occur.

Inspect the oil control solenoid flange O-rings; replace as necessary.



9. Install the bolts. Tighten the bolts in the sequence shown.
10. Rotate the camshafts one full turn and inspect them for binding.
11. Install the camshaft sprockets.
12. Install the timing belt.
13. Install the valve cover.