

## REMOVAL

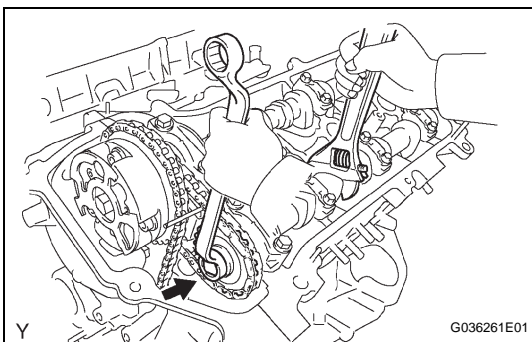
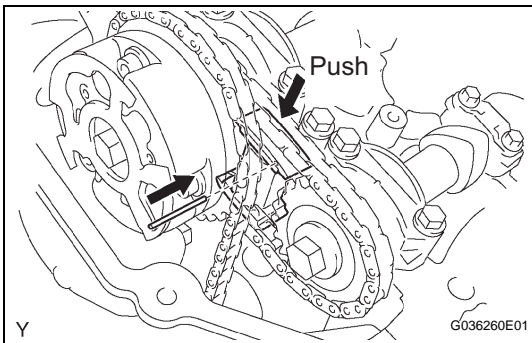
1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL
2. DRAIN ENGINE COOLANT (See page [CO-3](#))
3. REMOVE V-BANK COVER (See page [ES-414](#))
4. REMOVE AIR CLEANER ASSEMBLY (See page [ES-415](#))
5. REMOVE INTAKE AIR SURGE TANK (See page [EM-57](#))
6. REMOVE IGNITION COIL ASSEMBLY (See page [IG-7](#))
7. REMOVE CYLINDER HEAD COVER SUB-ASSEMBLY (See page [EM-59](#))
8. REMOVE CYLINDER HEAD COVER SUB-ASSEMBLY LH (See page [EM-59](#))
9. SET NO.1 CYLINDER TO TDC/COMPRESSION (See page [EM-59](#))
10. REMOVE NO.1 CHAIN TENSIONER ASSEMBLY (See page [EM-26](#))

11. REMOVE NO.4 CAMSHAFT SUB-ASSEMBLY

**NOTICE:**

Keep the camshaft level while it is being removed. The camshaft thrust clearance is very small and failing to keep it level could crack or damage the cylinder head journal surface, which receives the thrust. This could subsequently lead the camshaft to seize or break. Perform the following steps to avoid such problems.

- (a) While pushing down the chain tensioner No. 3, insert a pin of  $\phi$  1.0 mm (0.039 in.) into the hole to fix it.

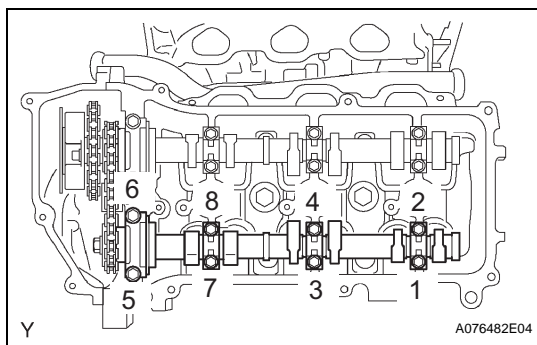


- (b) Hold the hexagonal portion of the No. 4 camshaft with a wrench, and remove the camshaft timing gear set bolt.

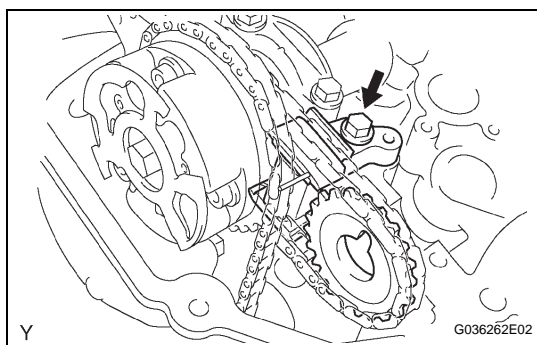
**NOTICE:**

**Be careful not to damage the cylinder head and valve lifter with the wrench.**

- (c) Separate the camshaft timing gear from the No. 4 camshaft.



- (d) Using several steps, uniformly loosen and remove the 8 bearing cap bolts in the sequence shown in the illustration.
- (e) Remove the 4 bearing caps and No. 4 camshaft.



## 12. REMOVE NO.3 CHAIN TENSIONER ASSEMBLY

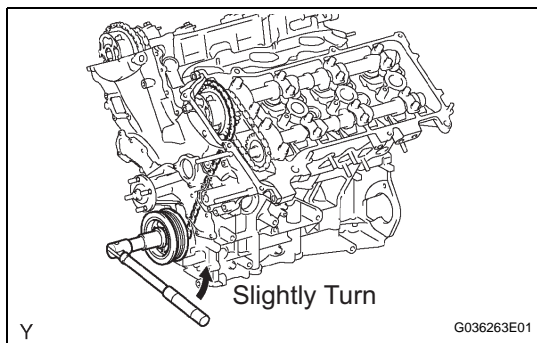
- (a) Remove the chain tensioner No. 3 bolt, then remove the chain tensioner No. 3 and camshaft timing gear.

## 13. REMOVE NO.3 CAMSHAFT SUB-ASSEMBLY

### NOTICE:

Keep the camshaft level while it is being removed. The camshaft thrust clearance is very small and failing to keep it level could crack or damage the cylinder head journal surface, which receives the thrust. This could subsequently lead the camshaft to seize or break. Perform the following steps to avoid such problems.

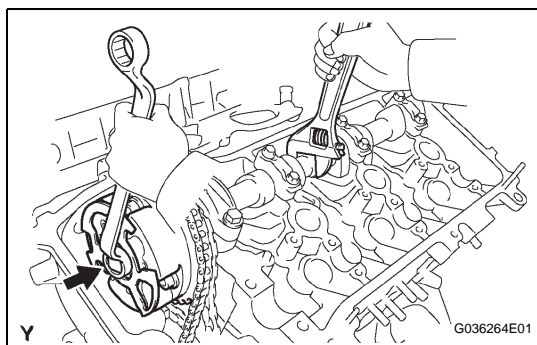
- (a) Release the chain tension between the camshaft timing gear (LH bank) and crankshaft timing gear by turning the crankshaft pulley counterclockwise slightly.

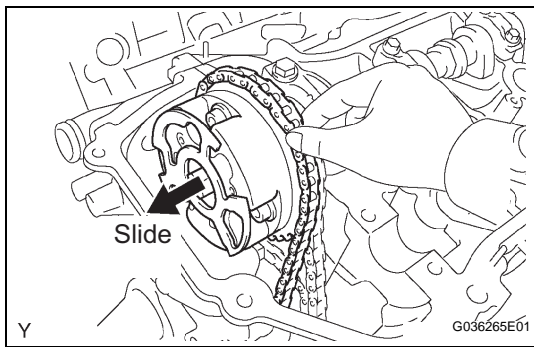


- (b) Hold the hexagonal portion of the No. 3 camshaft with a wrench, then loosen the camshaft timing gear set bolt.

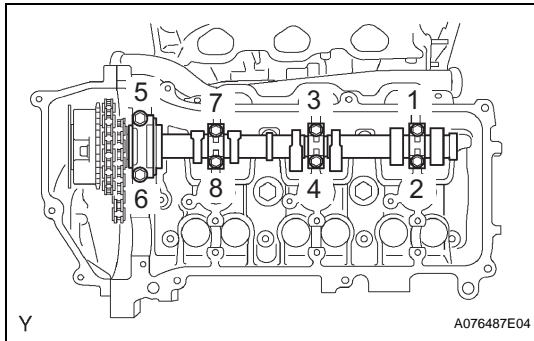
### NOTICE:

- Be careful not to damage the cylinder head and valve lifter with the wrench.
- Do not disassemble the camshaft timing gear assembly.

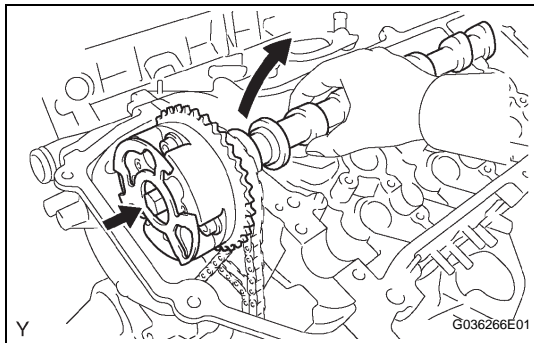




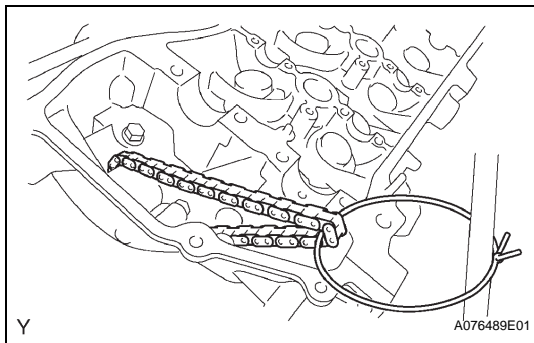
- (c) Slide the camshaft timing gear and separate the No. 1 chain from the camshaft timing gear.



- (d) Using several steps, uniformly loosen and remove the 8 bearing cap bolts in the sequence shown in the illustration.  
 (e) Remove the 4 bearing caps.



- (f) Remove the camshaft timing gear set bolt with the No. 3 camshaft lifted up, then remove the No. 3 camshaft and camshaft timing gear w/ No. 2 chain.



- (g) Tie the No. 1 chain with a string as shown in the illustration.  
**NOTICE:**  
**Be careful not to drop anything inside the timing chain cover.**