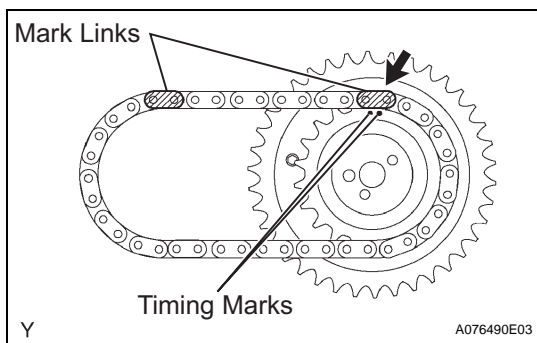


INSTALLATION

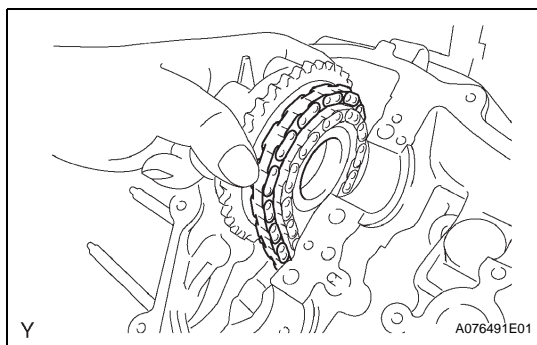
1. INSTALL NO.3 CAMSHAFT SUB-ASSEMBLY

NOTICE:

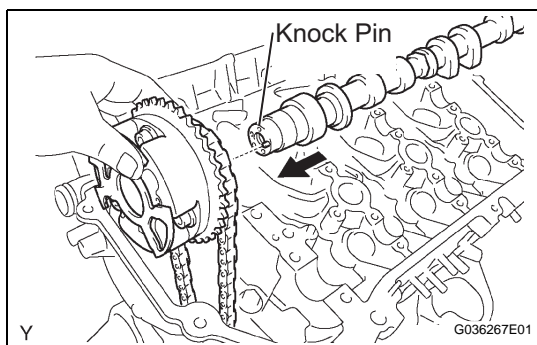
Keep the camshaft level while it is being removed. The camshaft thrust clearance is very small and failing to keep it level could crack or damage the cylinder head journal surface, which receives the thrust. This could subsequently lead the camshaft to seize or break. Perform the following steps to avoid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



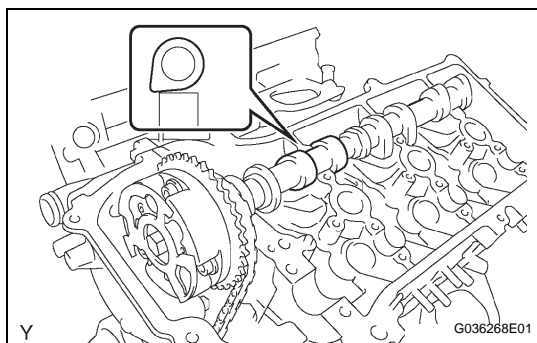
- Align the yellow mark link with the timing mark (2 dot marks) of the camshaft timing gear as shown in the illustration.
- Apply new engine oil to the thrust portion and journal of the camshafts.



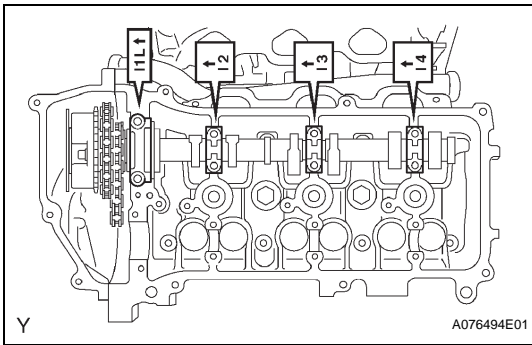
- Temporarily put the No. 1 chain on the No. 2 chain of the camshaft timing gear.



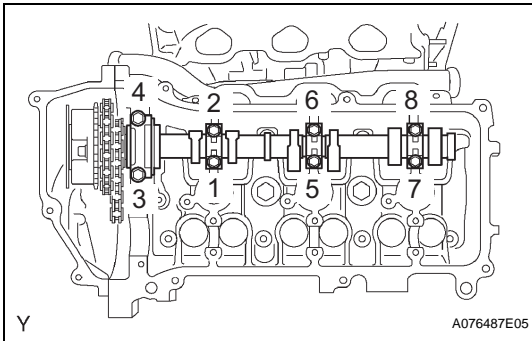
- Align the knock pin hole in the camshaft timing gear with the knock pin of the No. 3 camshaft, and insert the No. 3 camshaft into the camshaft timing gear.
- Temporarily install the camshaft timing gear set bolt.



- Set the No. 3 camshaft onto the LH cylinder head with the cam lobes of the No. 2 cylinder facing downward as shown in the illustration.

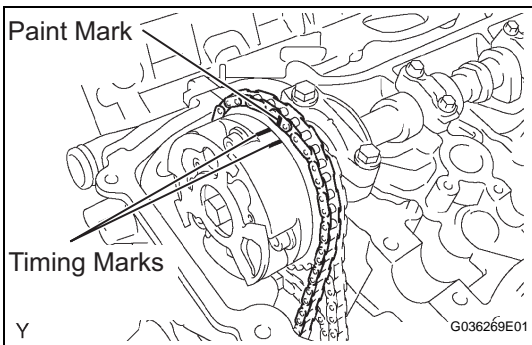


- (g) Install the 4 bearing caps in the proper locations as shown.
- (h) Apply a light coat of engine oil to the threads and under the heads of the bearing cap bolts.

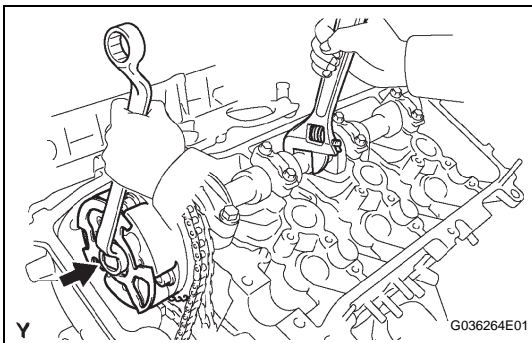


- (i) Using several steps, uniformly install and tighten the 8 bearing cap bolts in the sequence shown in the illustration.

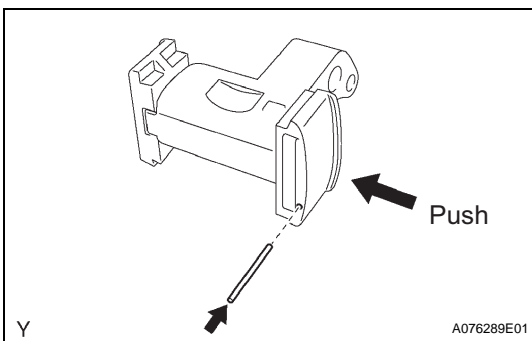
Torque: 9.0 N*m (92 kgf*cm, 80 in.*lbf) for 10 mm (0.39 in.) head
24 N*m (245 kgf*cm, 18 ft.*lbf) for 12 mm (0.47 in.) head



- (j) Align the paint mark of the No. 1 chain with the timing marks of the camshaft timing gear.

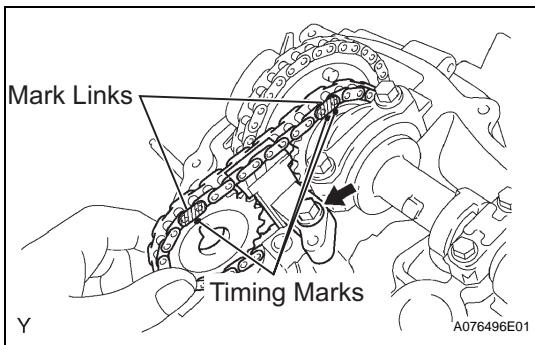


- (k) Hold the hexagonal portion of the No. 3 camshaft with a wrench, and tighten the camshaft timing gear set bolt.
Torque: 100 N*m (1,020 kgf*cm, 74 ft.*lbf)



2. INSTALL NO.3 CHAIN TENSIONER ASSEMBLY

- (a) While pushing in the tensioner, insert a pin of ϕ 1.0 mm (0.039 in.) into the hole to hold it.



- (b) Temporarily install the camshaft timing gear and chain tensioner No. 3 and align the yellow mark links with the timing marks (1 dot mark and 2 dot marks) of the camshaft timing gears.

- (c) Tighten the chain tensioner No. 3 bolt.

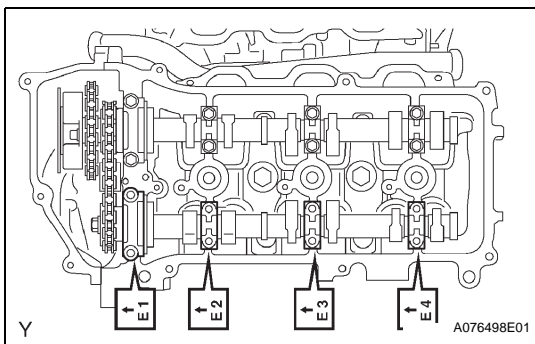
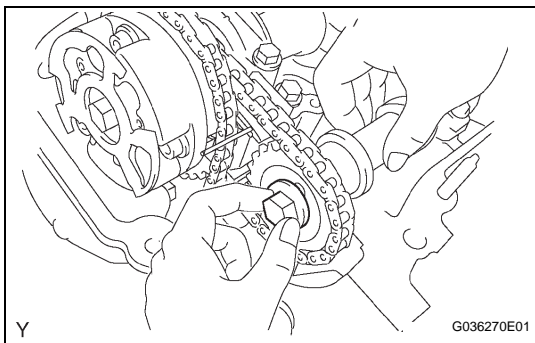
Torque: 19 N*m (194 kgf*cm, 14 ft.*lbf)

3. INSTALL NO.4 CAMSHAFT SUB-ASSEMBLY

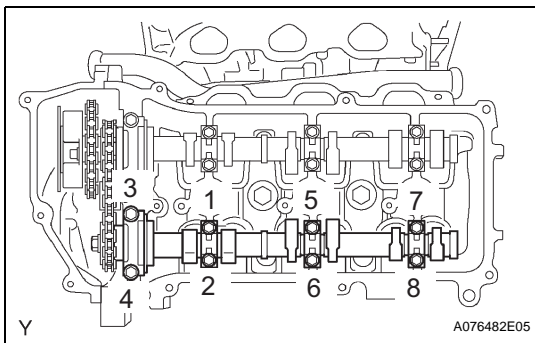
NOTICE:

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) Align the knock pin hole in the camshaft timing gear with the knock pin of the No. 4 camshaft, and insert the No. 4 camshaft into the camshaft timing gear.
- (b) Temporarily install the camshaft timing gear set bolt.

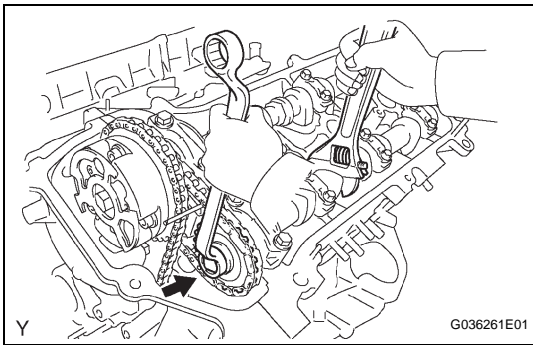


- (c) Install the 4 bearing caps in the proper locations as shown.
- (d) Apply a light coat of engine oil to the threads of the bearing cap bolts.



- (e) Using several steps, uniformly install and tighten the 8 bearing cap bolts in the sequence shown in the illustration.

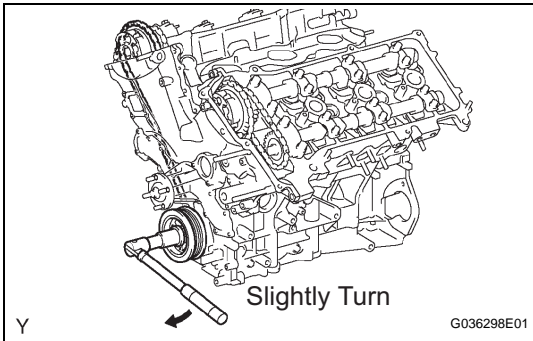
Torque: 9.0 N*m (92 kgf*cm, 80 in.*lbf) for 10 mm (0.39 in.) head
24 N*m (245 kgf*cm, 18 ft.*lbf) for 12 mm (0.47 in.) head



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

Torque: 100 N*m (1,020 kgf*cm, 74 ft.*lbf)

- (g) Remove the pin from the chain tensioner No. 3.



- (h) Release the chain tension between the camshaft timing gear (RH bank) and crankshaft timing gear by turning the crankshaft pulley clockwise slightly.

4. **INSTALL NO.1 CHAIN TENSIONER ASSEMBLY** (See page [EM-27](#))
5. **SET NO.1 CYLINDER TO TDC/COMPRESSION** (See page [EM-25](#))
6. **INSPECT VALVE CLEARANCE** (See page [EM-8](#))
7. **ADJUST VALVE CLEARANCE** (See page [EM-9](#))
8. **INSTALL CYLINDER HEAD COVER SUB-ASSEMBLY LH** (See page [EM-68](#))
9. **INSTALL CYLINDER HEAD COVER SUB-ASSEMBLY** (See page [EM-68](#))
10. **INSTALL IGNITION COIL ASSEMBLY**
Torque: 10 N*m (102 kgf*cm, 7.4 ft.*lbf)
11. **INSTALL INTAKE AIR SURGE TANK** (See page [EM-69](#))
12. **INSTALL AIR CLEANER ASSEMBLY** (See page [ES-416](#))
13. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)
14. **ADD ENGINE COOLANT** (See page [CO-3](#))
15. **CHECK FOR ENGINE COOLANT LEAKAGE** (See page [CO-4](#))
16. **INSTALL V-BANK COVER**
 - (a) Install the V-bank cover with the 2 nuts.
Torque: 7.5 N*m (76 kgf*cm, 66 in.*lbf)
17. **INSPECT IGNITION TIMING** (See page [EM-1](#))