

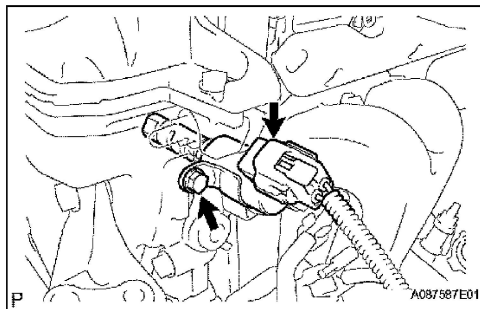
Variable Valve Timing Actuator: Service and Repair

REMOVAL

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION: Wait at least **90 seconds** after disconnecting the cable from the negative (-) battery terminal to prevent airbag and seat belt pretensioner activation.

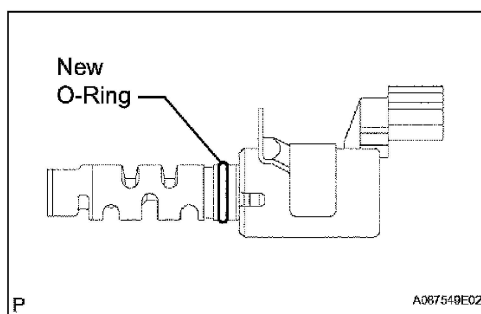
2. REMOVE RADIATOR SUPPORT OPENING COVER
3. REMOVE AIR CLEANER ASSEMBLY



4. REMOVE CAMSHAFT TIMING OIL CONTROL VALVE ASSEMBLY

- a. Disconnect the camshaft timing oil control valve connector.
- b. Remove the bolt and camshaft timing oil control valve.

INSTALLATION



1. INSTALL CAMSHAFT TIMING OIL CONTROL VALVE ASSEMBLY

- a. Apply a light coat of engine oil to a new O-ring, then install it to the camshaft timing oil control valve.
- b. Install the camshaft timing oil control valve with the bolt.

Torque: **7.5 N.m (76 kgf.cm, 66 in.lbf)**

NOTE: Be careful that the O-ring is not cracked or jammed when installing it.

- c. Connect the camshaft timing oil control valve connector.

2. INSTALL AIR CLEANER ASSEMBLY
3. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL
4. CHECK FOR ENGINE OIL LEAKS
5. INSTALL RADIATOR SUPPORT OPENING COVER
6. PERFORM INITIALIZATION
 - a. Perform initialization.

NOTE: Certain systems need to be initialized after disconnecting and reconnecting the cable from the negative (-) battery terminal.