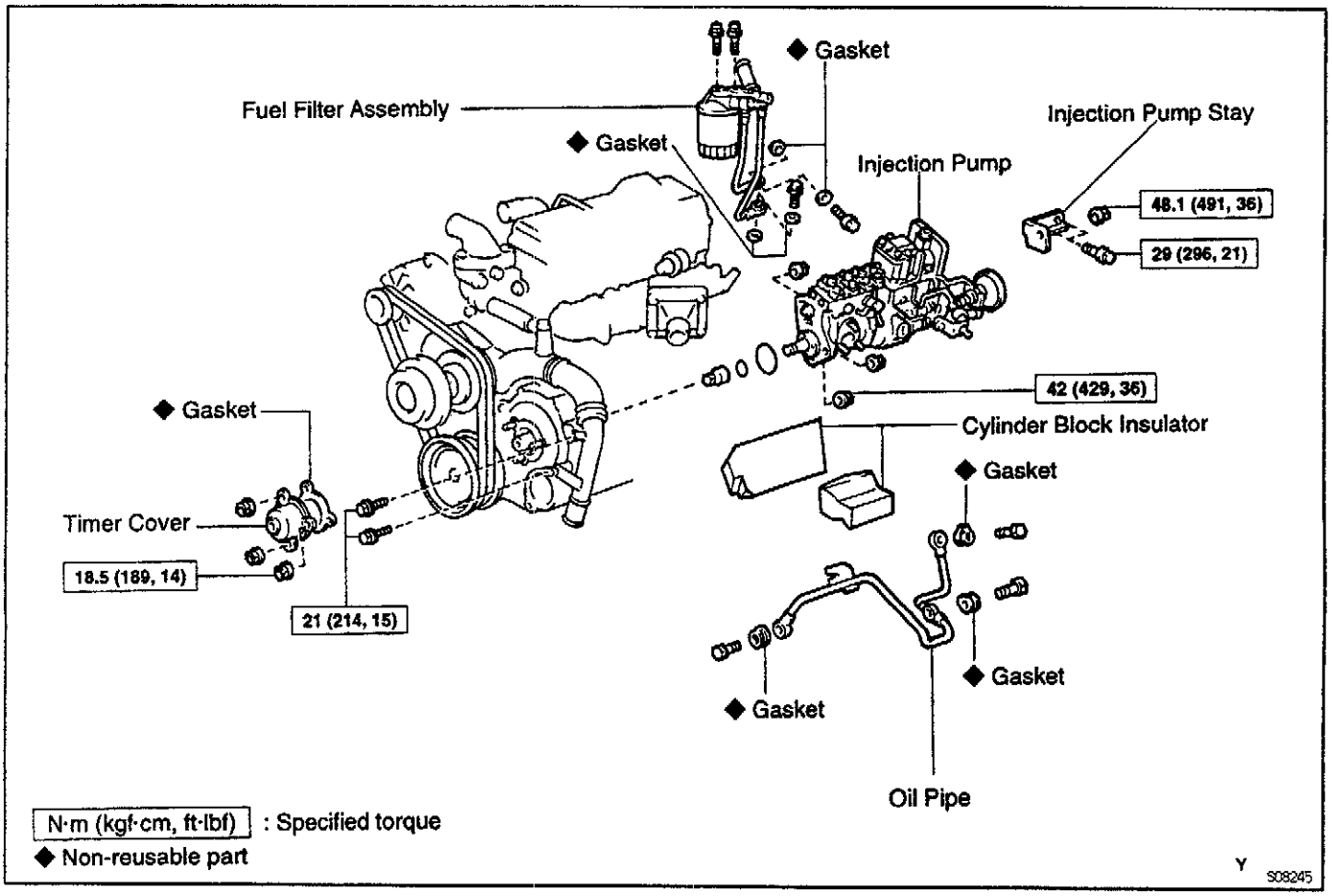
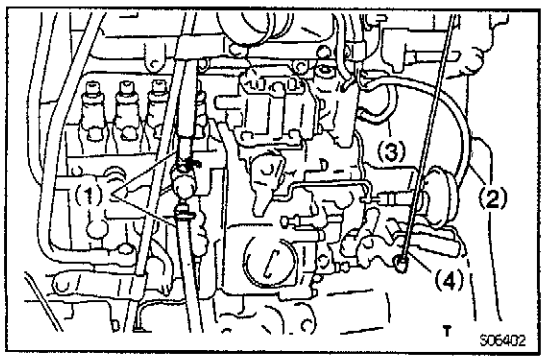
INJECTION PUMP

COMPONENTS FOR REMOVAL AND INSTALLATION



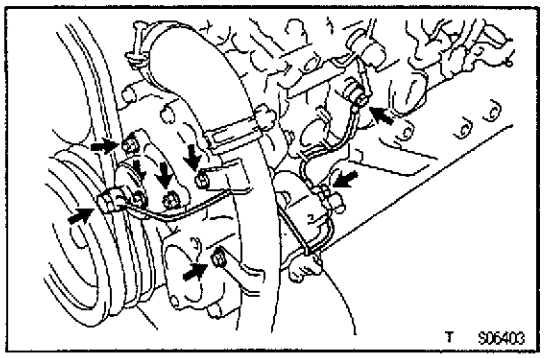
INJECTION PUMP REMOVAL

1. **REMOVE INJECTION PIPES**
   (See injection nozzles removal)
2. **REMOVE FUEL FEED PUMP**

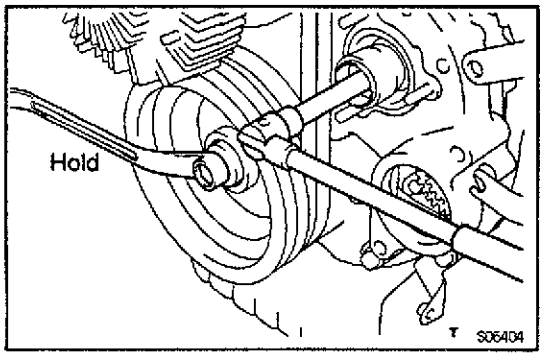


3. **REMOVE INJECTION PUMP**

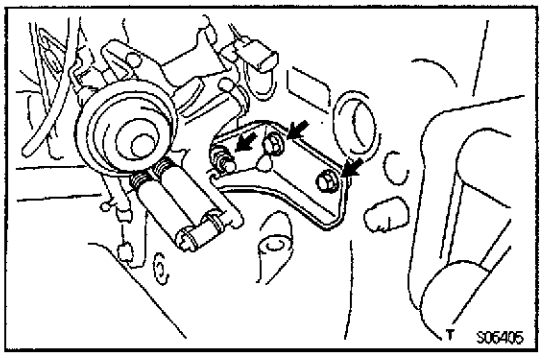
(a) Disconnect these hoses and link:
   (1) 2 fuel return hoses
   (2) Vacuum hose (for FCV)
   (3) Boost compensator hose
   (4) Accelerator cable



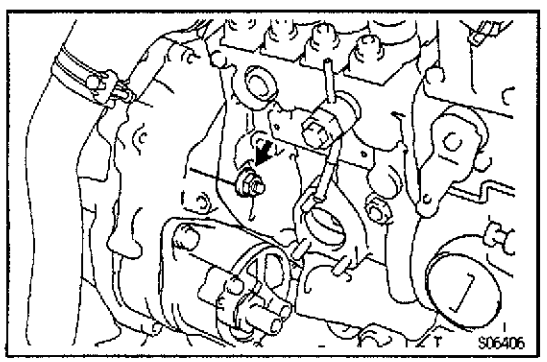
(b) Remove the 2 union bolts, 4 gaskets, 2 bolts and fuel filter assembly.
(c) Remove the 3 bolts, the oil dipstick and guide assembly.
(d) Remove the 2 bolts holding the radiator pipe clamp and oil pipe clamp from the timing gear cover.
(e) Remove the 3 union bolts, 3 gaskets and oil pipe.
(f) Remove the 3 nuts, gasket and timer cover.



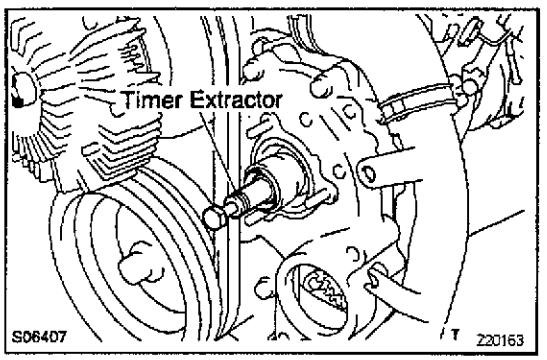
(g) Hold the crankshaft pulley and, remove the round nut.



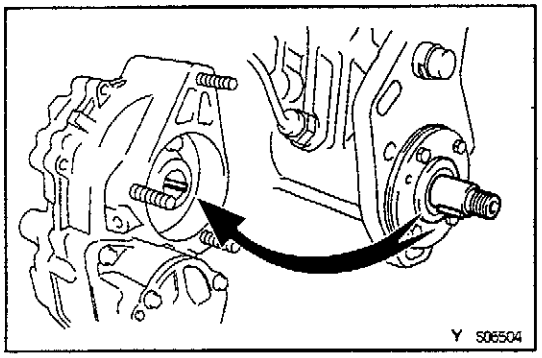
(h) Remove the nut, 2 bolts and injection pump stay.



(i) Before removing the injection pump, check if the matchmarks are aligned. If not, place new matchmarks for reinstallation.
(j) Loosen the nut and remove the 3 nuts from the injection pump.



(k) Using a timer extractor, remove the injection pump.
Part No. 95094—10070 (DENSO)
(l) Remove the O—ring from the injection pump flange.



INJECTION PUMP INSTALLATION

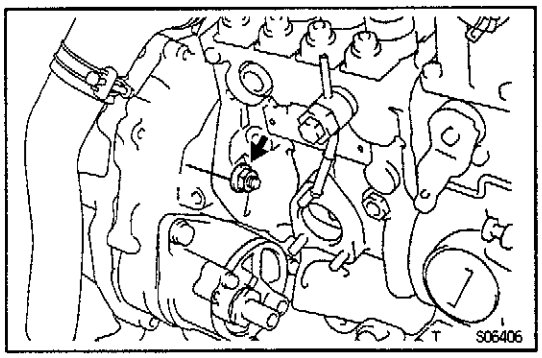
1. INSTALL INJECTION PUMP

NOTICE: Do not put the injection pump at an angle more than 45° from the horizontal.

(a) Install a new O–ring to the pump.

(b) Apply a light coat of engine oil on the O–ring.

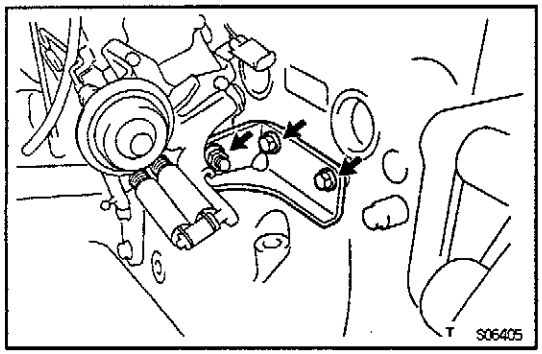
(c) Align the set key on the drive shaft and groove of the injection pump drive gear.



(d) Align the matchmark of the injection pump flange and timing gear case.

(e) Install the injection pump with the 3 nuts.

Torque: 42 N·m (429 kgf·cm, 31 ft·lbf)



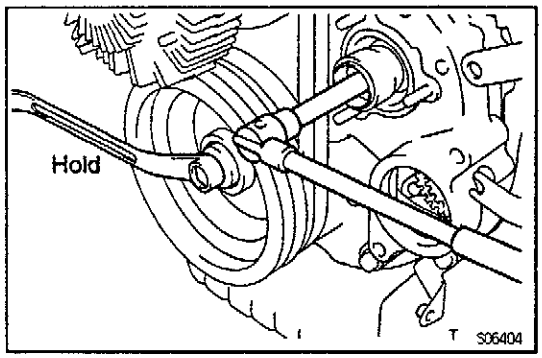
(f) Install the injection pump stay with the nut and 2 bolts.

Torque:

Bolt: 29 N·m (296 kgf·cm, 21 ft·lbf)

Nut: 48.1 N·m (491 kgf·cm, 36 ft·lbf)

NOTICE: Before tightening to the standard torque, check whether the pump stay is up against the injection pump. If there is a gap, loosen the bolts joining the pump stay to the cylinder block and set the pump stay against the injection pump.



(g) Connect the accelerator link to the injection pump.

(h) Connect the injection pump connector.

(i) Install the injection pump round nut.

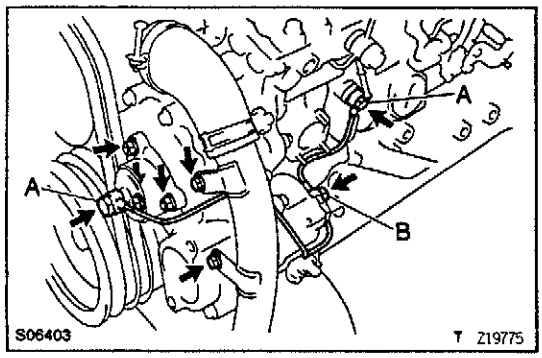
(j) Hold the crankshaft pulley, and torque the round nut.

Torque: 137 N·m (1,400 kgf·cm, 101 ft·lbf)

NOTICE: Do not turn the crankshaft pulley. The valve heads will hit against the piston top.

(k) Check injection timing

(See injection timing adjustment in Engine Mechanical)



(l) Install a new gasket and the timer cover with the 3 nuts.

Torque: 18.5 N·m (189 kgf·cm, 14 ft·lbf)

(m) Install 3 new gaskets and the oil pipe with the 3 union bolts.

Torque:

Bolt A: 10.3 N·m (105 kgf·cm, 8 ft·lbf)

Bolt B: 16.5 N·m (168 kgf·cm, 12 ft·lbf)

(n) Install the 2 bolts holding the radiator pipe clamp and oil pipe clamp to the timing gear cover.
Torque: 21 N·m (214 kgf·cm, 15 ft·lbf)

(o) Install the fuel filter assembly with 2 bolts, 4 new gaskets and 2 union bolts.
Torque: 36.8 N·m (375 kgf·cm, 27 ft·lbf)

(p) Connect these hose and link:
- Accelerator cable
- Boost compensator hose
- Vacuum hose (for FCV)
- 2 fuel return hoses

2. INSTALL FUEL FEED PUMP

3. INSTALL INJECTION PIPES
(See injection pipe installation)

4. FILL INJECTION PUMP WITH FUEL
(See fuel filter)

5. BLEED INJECTION NOZZLES

(a) Loosen all union nuts of the injection pipe on the nozzle side.

(b) Crank the engine to bleed air and force out the fuel from the injection pipe.

6. START ENGINE AND CHECK FOR FUEL LEAKS

7. CHECK ENGINE IDLE SPEED AND MAXIMUM SPEED
(See idle speed and maximum speed inspection in Engine Mechanical)