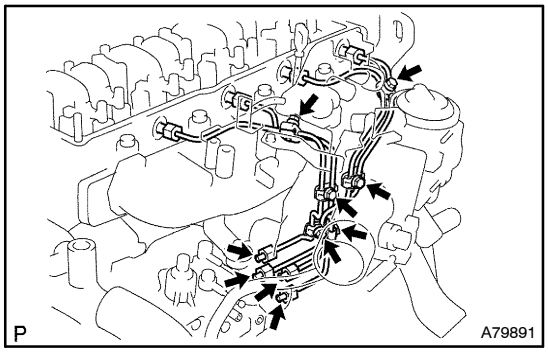
110Q3–01

REPLACEMENT

1. DISCONNECT BATTERY NEGATIVE TERMINAL

2. DRAIN FUEL

3. DRAIN ENGINE COOLANT



4. REMOVE FUEL PIPE SET

(a) Remove the 2 bolts and VSV bracket.

(b) Loosen the union nuts of the 4 injection pipes.
SST 09023–12700

(c) Remove the 3 bolts, 2 nuts, 4 injection pipes and clamps.

5. DISCONNECT FUEL MAIN HOSE

6. DISCONNECT FUEL RETURN HOSE

7. REMOVE INJECTION PUMP ASSY

(a) Disconnect the connectors.

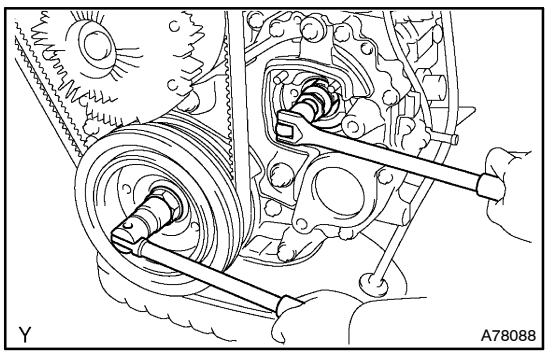
(b) Remove the 2 bolts and radiator hose and pipe.

(c) Remove 4 bolts and No. 1 engine cover.

(d) Remove the 2 bolts and intake manifold stay.

(e) Remove the 4 bolts and 2 injection pump stay.

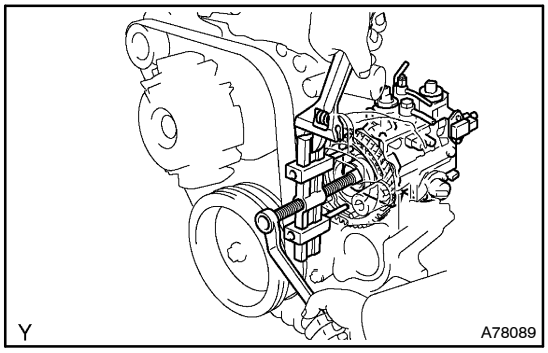
(f) Remove the 4 nuts and No. 2 gear cover.



(g) Hold the crankshaft pulley, and remove the injection pump drive gear nut.

(h) Remove the 2 injection pump stay with the 4 bolts.

(i) Remove the 4 nuts holding the injection pump to the timing gear case.



(j) Using SST, remove the injection pump.
SST 09950–50013 (09951–05010, 09952–05010, 09953–05020, 09954–05021)

8. REMOVE FUEL OUTLET PIPE

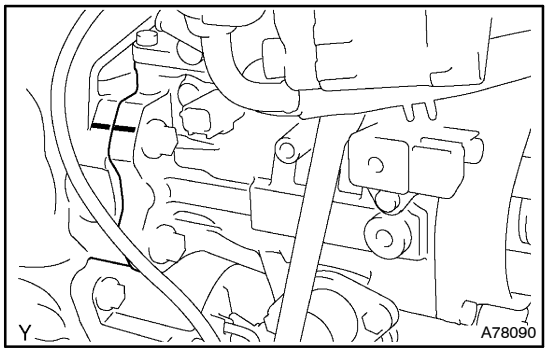
9. REMOVE FUEL INLET PIPE

10. INSTALL FUEL INLET PIPE

11. INSTALL FUEL OUTLET PIPE

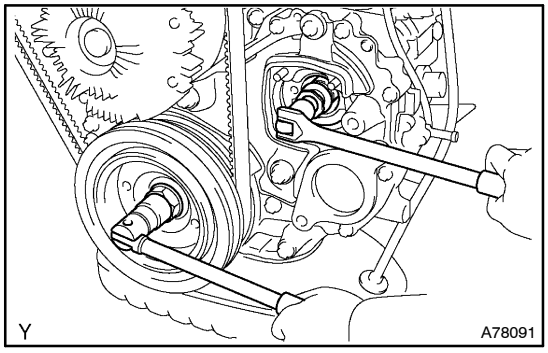
12. INSTALL INJECTION PUMP ASSY

(a) Apply a light coat of engine oil on the O–ring.
(b) Install a new O–ring to the injection pump.
(c) Place the No. 1 cylinder block insulator.
(d) Align the set key on the drive shaft with the key groove of the injection pump drive gear.
(e) Temporarily install the 2 injection pump bracket.



(f) Align the matchmarks of the injection pump and timing gear case.
(g) Install the 4 nuts holding the injection pump to the timing gear case.
Torque: 18.5 N·m (189 kgf·cm, 14 ft·lbf)
(h) Tighten the 4 bolts of injection pump stay, completely.
Torque:
Injection pump stay to injection pump:
18.5 N·m (189 kgf·cm, 14 ft·lbf)
Injection pump stay to cylinder block:
37.5 N·m (382 kgf·cm, 28 ft·lbf)

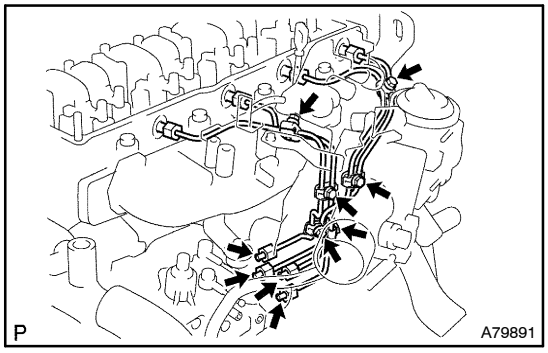
NOTICE:
Before tightening to the standard torque, check whether the pump stay is up against the injection pump.
If there is a gap, looosen the bolts joining the pump stay to the cylinder block and set the pump stay against the injection pump.



(i) Hold the crankshaft pulley, and install the injection pump drive gear 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.
(j) Install the No. 2 gear cover with the 4 nuts.
(k) Install the intake manfold stay with the 4 bolts.
(l) Install the No. 1 engine cover with the 4 bolts.
(m) Install the radiator hose and pipe with the 2 bolts.
(n) Connect the connectors.

13. CONNECT FUEL RETURN HOSE
14. CONNECT FUEL MAIN HOSE



15. INSTALL FUEL PIPE SET

(a) Temporarily install a flare nut respectively on the nozzle side and pump side.

(b) Install the injection pipe clamp to the injection pipe.
Torque: 7.5 N·m (76 kgf·cm, 66 in.·lbf)

(c) Tighten the flare nuts completely.
SST 09023–12700
Torque: 25 N·m (255 kgf·cm, 18 ft·lbf)

(d) Install the VSV bracket with the 2 bolts.

16. ADD FUEL
17. ADD COOLANT
18. CONNECT BATTERY NEGATIVE TERMINAL
19. BLEED FUEL (See page 11–57)
20. ADJUST INJECTION TIMING (See page 14–40)
21. INSPECT FOR FUEL LEAKS
22. INSPECT CHECK FOR ENGINE COOLANT LEAKS