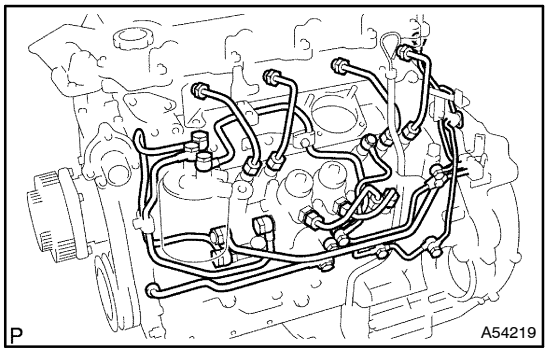
110DM–02

REPLACEMENT

1. DISCONNECT BATTERY NEGATIVE TERMINAL
2. DRAIN FUEL
3. REMOVE INTAKE AIR CONNECTOR
4. DISCONNECT HARNESS AND CONNECTOR
5. REMOVE OIL LEVEL GAUGE SUB–ASSY
6. REMOVE INTAKE AIR PIPE
7. REMOVE INJECTION PIPE SET (See page 11–159)



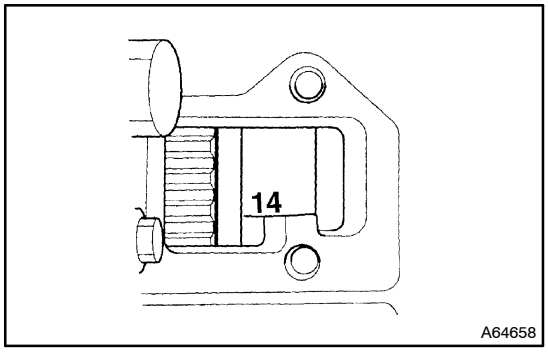
8. REMOVE FUEL PIPE SET

(a) Remove the illustrated fuel pipe.

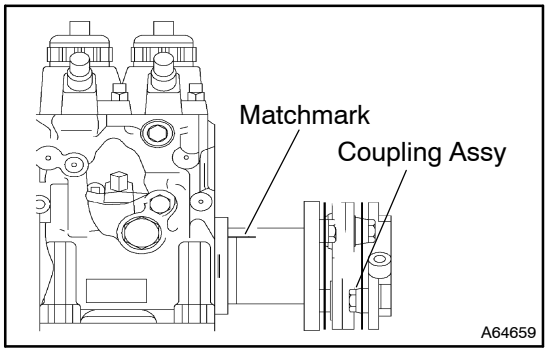
9. REMOVE DIESEL FUEL FILTER ASSY (See page 11–156)
10. REMOVE SUPPLY PUMP ASSY

NOTICE:

The fuel in the common–rail may have a high temperature (approx. 100°C (212°F)) immediately after driving. Perform the operation after the engine cools off because there is a danger of fire or burning.

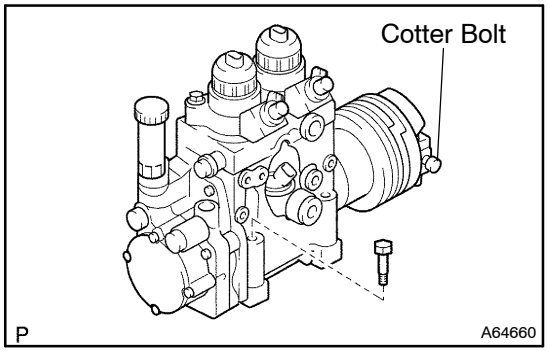


(a) Turn the flywheel clockwise in the engine direction and align the No. 1 cylinder mark to the pointer in the flywheel hosing inspection opening.



(b) Adjust the top dead center of the No. 1 cylinder and timing mark of the supply pump.

(c) Remove the coupling bolt.



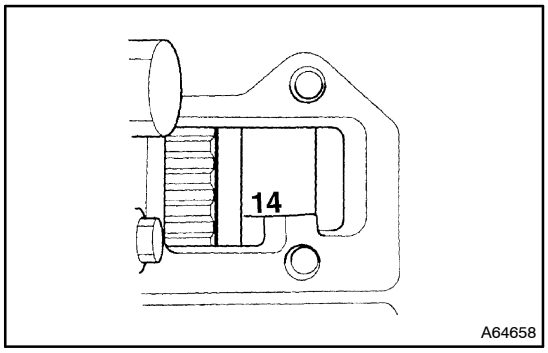
(d) Loosen the cotter bolt.

NOTICE:

Loosen the cotter bolt and be careful not to apply excess pressure to the laminated coupling when installing the supply pump.

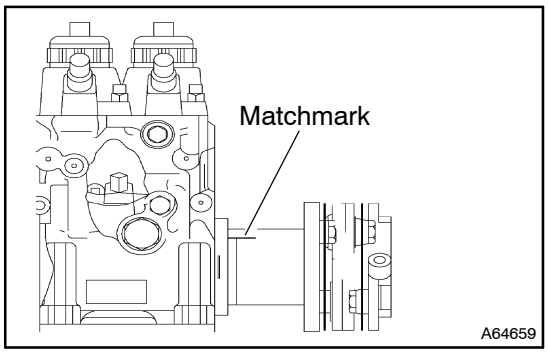
(e) Remove the 4 bolts.

(f) Remove the supply pump assy.

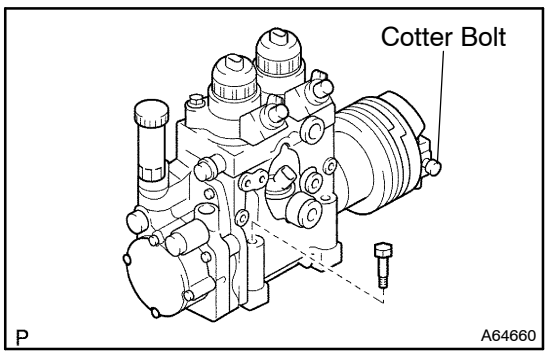


11. INSTALL SUPPLY PUMP ASSY

(a) Turn the crankshaft counterclockwise, as viewed from the flywheel side, and then align the timing mark in the check window of the flywheel housing with a mark of 1/4. At this time, the No. 1 cylinder or the No. 4 cylinder is in the top dead center, and therefore set the No. 1 cylinder in the top dead center as follows.

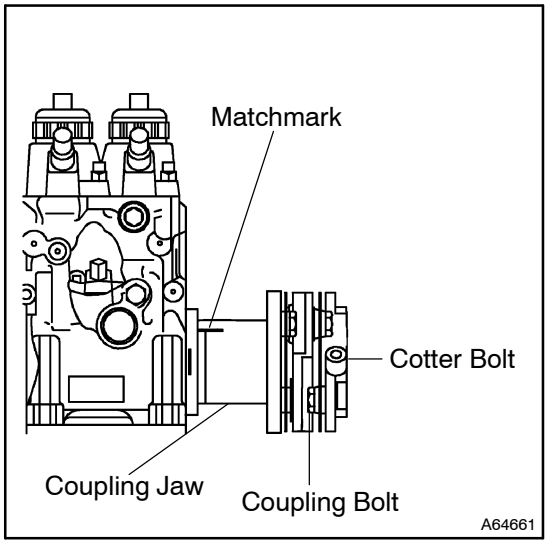


(b) Check that the timing mark of the supply pump is correctly set in the top dead center of the No. 1 cylinder. At this time a slight difference is acceptable. If the timing mark is set in the 180 degrees opposite direction, the supply pump is set in the top dead center of the No. 4 cylinder. At this time, adjust the supply pump to be in the top dead center of the No. 1 cylinder by turning the flywheel one revolution.



(c) Check that the cotter bolt is loose, and then install the supply pump to the bracket.

Torque: 25 N·m (250 kgf·cm, 18 ft·lbf)



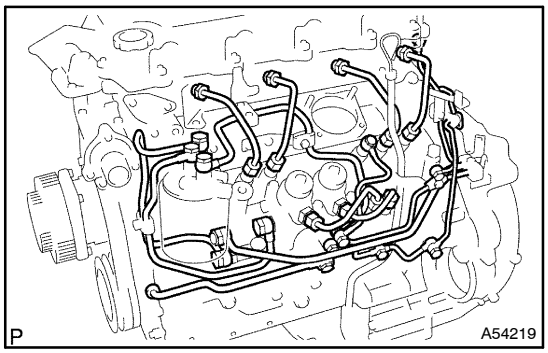
(d) Install the 2 coupling bolts temporarily, align the timing mark of the supply pump, and then tighten the bolt.
Torque: 61.3 N·m (625 kgf·cm, 45 ft·lbf)

NOTICE:
Check that no clearance exists between the laminated plates. And also check that the flange has not been deformed by pressing the laminated plates.

(e) Tighten the cotter bolt.
Torque: 90.7 N·m (925 kgf·cm, 67 ft·lbf)

NOTICE:
Check that the laminated plates have not been deformed, or have not been under excess pressure.

12. INSTALL DIESEL FUEL FILTER ASSY (See page 11–156)



13. INSTALL FUEL PIPE SET

(a) Install the fuel pipes.

14. INSTALL INJECTION PIPE SET (See page 11–159)
15. INSTALL INTAKE AIR PIPE
16. INSTALL OIL LEVEL GAUGE SUB–ASSY
17. INSTALL HARNESS AND CONNECTOR
18. INSTALL INTAKE AIR CONNECTOR
19. ADD FUEL
20. BLEED FUEL (See page 11–156)
21. INSTALL BATTERY NEGATIVE TERMINAL
22. INSPECT FOR FUEL LEAKS (See page 11–155)