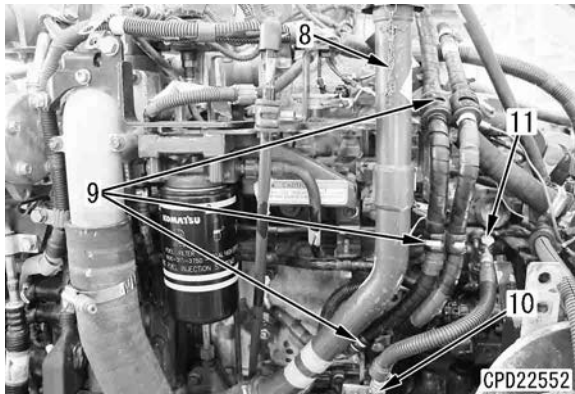
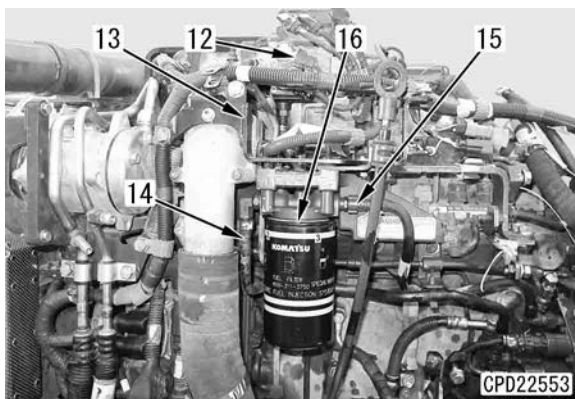


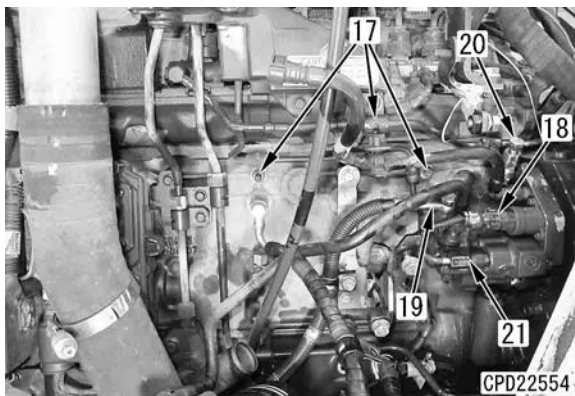
11. Remove hose clamp (10), and disconnect fuel hose (11). [\*1]



12. Remove EGR valve assembly (12). For details, see "Removal and installation of EGR valve assembly." [\*2]  
13. Remove bracket (13).  
14. Disconnect fuel hoses (14) and (15).  
15. Remove fuel filter and bracket (16).



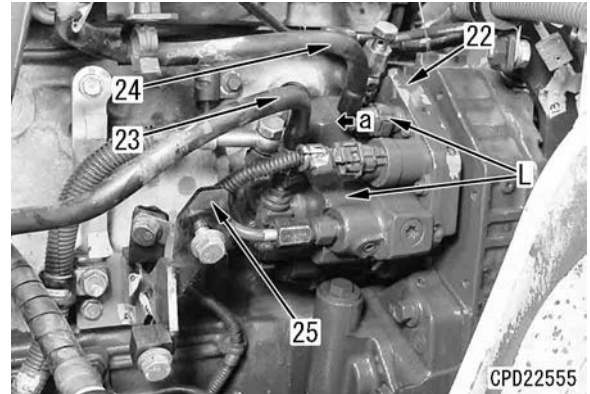
16. Remove tube clamps (17) (3 pieces). [\*3]  
17. Disconnect harness connector (18).  
18. Disconnect fuel supply hose (19). [\*4]  
19. Disconnect fuel return tube (20). [\*5]  
20. Remove the fuel spray prevention cap, and remove the fuel high-pressure pipe (21). [\*6]



21. Disconnect fuel filter hoses (23) and (24) from supply pump assembly (22). [\*7]

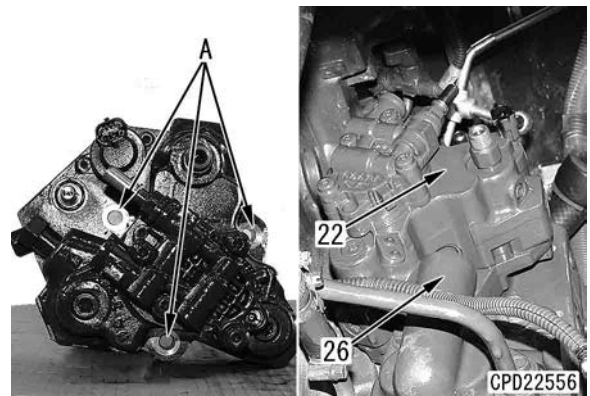
★ Pull out hose to the direction of (a) while pressing lock (L) on the both sides.

22. Remove bracket (25).

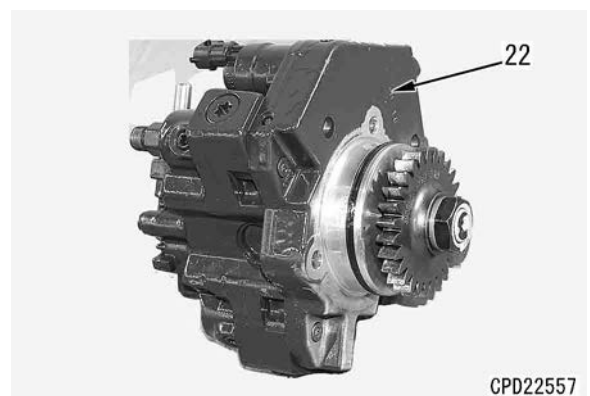


23. Remove mounting nuts (A) (3 pieces), and remove supply pump assembly (22). [\*8]

★ Pull supply pump assembly (22) sideways straight when removing it. Otherwise the pump assembly may interfere with the top of boost pump (26).



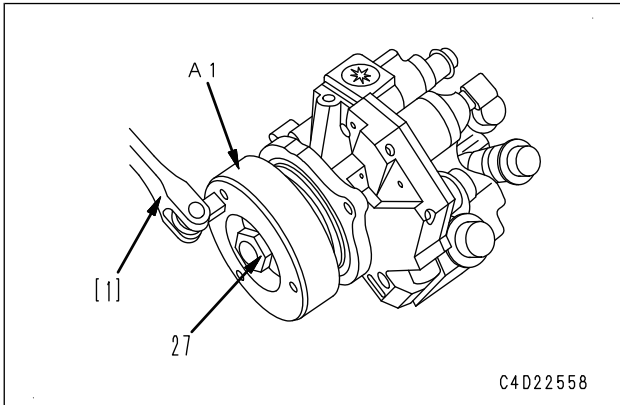
★ Supply pump assembly (22) comes off with the gear. The gear is not worked on its teeth (no missing tooth) to show the mark for 1, 6 TDC adjustment.



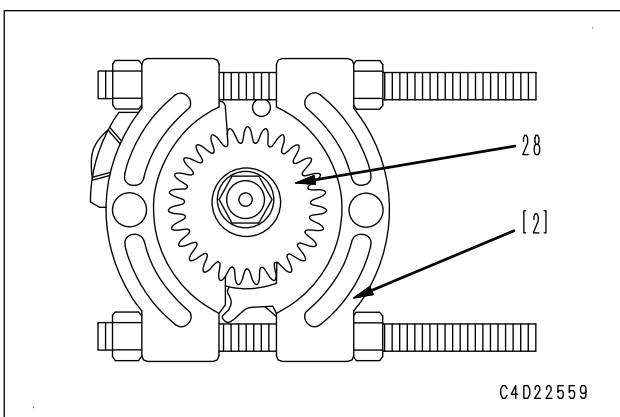
24. Remove the gear from the supply pump assembly according to the following procedure. [\*9]

1) While locking the gear by using tool A1 and 1/2-inch spin handle [1], loosen mounting nut (27).

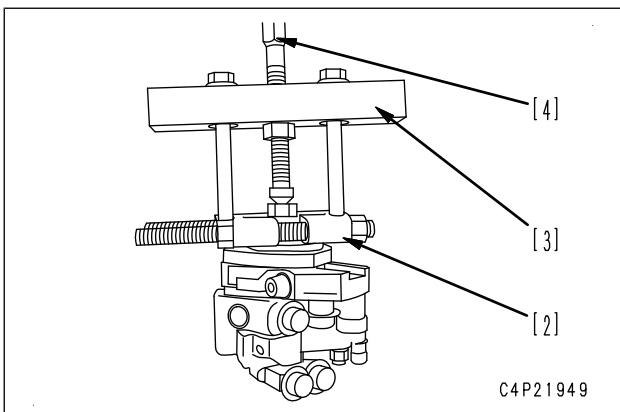
★ Remove mounting nut (27) from the shaft.



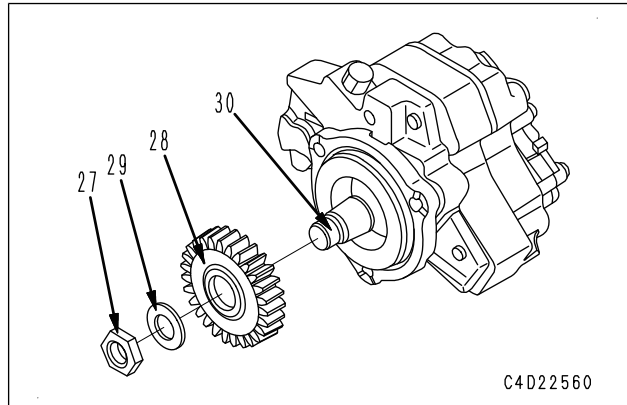
2) Install puller [2] between the flange and gear (28).



3) Install puller [3] on puller [2] and the shaft.  
 4) Turn center bolt [4] until the gear is disengaged from the shaft.  
 5) Remove pullers [2] and [3].




6) Remove mounting nut (27), lock washer (29) and gear (28) from shaft (30).



**Installation** (D61-AD70-720-K-00-A)

- Perform installation in the reverse order to removal.

[\*1]

 **Fuel hose (11) mounting bolt:**  
**19.6 to 29.4 Nm {2.0 to 3.0 kgm}**


[\*2]

Install EGR valve assembly (12). For details, see "Removal and installation of EGR valve assembly".


[\*3]

 **Tube clamp (17):**  
**24 ± 4 Nm {2.45 ± 0.41 kgm}**

[\*4]


 **Fuel supply hose (19) mounting bolt:**  
**25.4 to 34.3 Nm {2.6 to 3.5 kgm}**

[\*5]

 **Fuel return tube (20) joint bolt:**  
**24 ± 4 Nm {2.5 ± 0.4 kgm}**

[\*6]

- How to install fuel high-pressure pipe (21)
  1. Finger-tighten sleeve nuts of fuel high-pressure fuel pipe (21). (both ends)
  2. Tighten the sleeve nuts on supply pump first, and then tighten the sleeve nuts on common rail side.

 **Sleeve nut:**  
**35 ± 3.5 Nm {3.57 ± 0.36 kgm}**

- Install fuel spray prevention caps.
  - ★ Direct slits of fuel spray prevention caps outward and downward.
  - ★ The fuel spray prevention caps are installed so that fuel will not spout over the hot part of the engine and catch fire when it leaks by any chance.

[\*7]

- When installing a connector of quick coupler type, observe the following points.

- ★ The internal parts of the fitting of the hose or tube may be damaged when it is once disconnected . Do not reuse them.
- ★ For installation, replace it with a new one.
- ★ Ensure that mud or dirt is not sticking to the hose joint portions in advance.
- ★ Push and insert the connector straight (in the direction of (b)) without prying or shaking it. If it is difficult to insert it, do not push it in forcibly but pull it out once. Then, check concave and convex portion for damage and dirt.

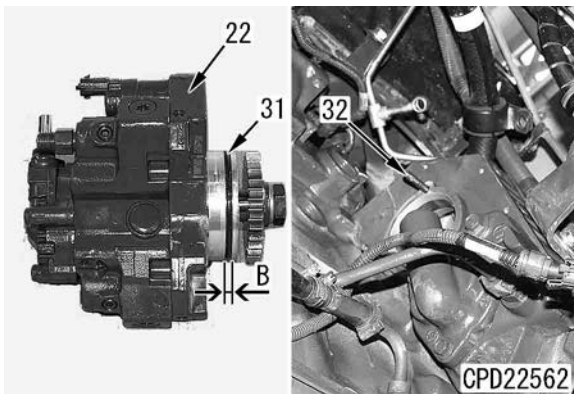


[\*8]

- Install supply pump assembly (22).
  - ★ If grease is applied too much to O-ring (31), it will ooze out. Do not apply grease too much. (Apply grease to the O-ring groove area of part B.)
  - ★ When installing new fuel supply pump mounting stud bolts (32) to replace the existing ones, apply Loctite to them when mounting.

 **Stud bolt (32):**

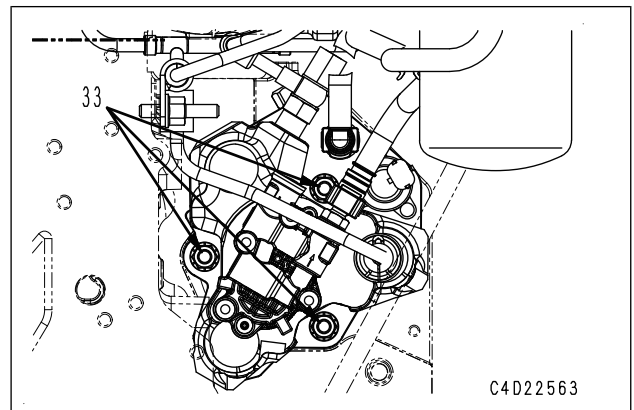
**12 ± 2 Nm {1.2 ± 0.2 kgm}**



- ★ Since it is difficult to install the cylinder block side nuts when installing supply pump assembly mounting nuts (33), be sure to use a new socket for their installation.
- ★ If an old socket is used, the nut may fall off or be damaged due to excess clearance between the socket and mounting nut (33).

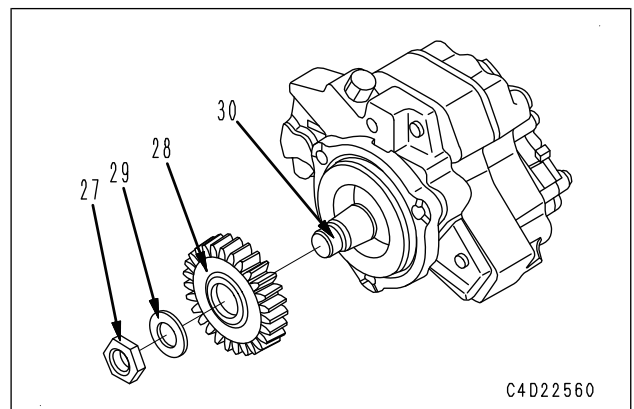
 **Supply pump assembly mounting nut (33):**

**24 ± 4 Nm {2.45 ± 0.41 kgm}**



[\*9]

- Procedure for installing gear (28)
  - ★ Before installation, clean dusts and foreign substances on the mating surfaces of shaft (30) and gear (28), and keep the mating surfaces dry.
  - 1. Install gear (28) to shaft (30).
  - 2. Install lock nuts (27) with washer (29), and finger-tighten the nut lightly.



- 3. While locking the gear by using tool A1 and 1/2-inch spin handle [1], tighten nut (27) to the specified torque.

 **Supply pump gear mounting nut (27):**

**105 ± 5 Nm {10.7 ± 0.51 kgm}**

- Refilling of coolant (radiator)

Refill with coolant to the specified level through the coolant filler port. Run the engine to circulate the coolant through the system. Then check the coolant level again.



#### **Radiator (engine coolant):**

**45 ℓ**

**(For details, see "Table of fuel, coolant and lubricants")**

- **Checking for fuel leakage (fuel system)**  
Check the fuel system for leakage. For details, see Testing and adjusting, "Checking fuel circuit for leakage".
- **Bleeding air (fuel system)**  
Bleed air from the fuel circuit. For details, see Testing and adjusting, "Bleeding air from fuel circuit".

## Removal and installation of fuel injector assembly (D61-AE60-924-K-00-A)

★ Special tools

Symbol	Part No.	Part name	Necessity	Qty
A	2	795-799-6700	■	1
	4	795-799-8150	●	1

⚠ Place machine on a level ground, and set parking brake lever to LOCK position.

⚠ Lower the work equipment to the ground, and set the work equipment lock lever to LOCK position.

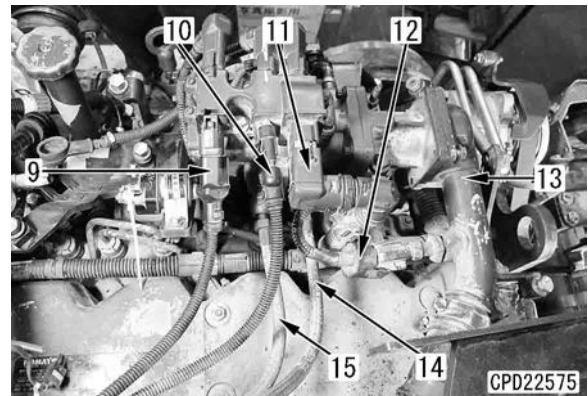
⚠ Turn the starting switch to OFF position, and stop the engine.

⚠ Turn the battery disconnect switch to OFF position, and remove the key. (For details, see Testing and adjusting, "Handling of battery disconnect switch".)

⚠ If you drain the coolant when it is still hot, you may be scalded. Wait until the coolant temperature drops before starting the work.

- Connector (10)
- Connector (11)
- Connector (12)
- Tube (13)
- Hose (14) (KVGT drive hydraulic circuit)
- Hose (15) (KVGT control pressure circuit)

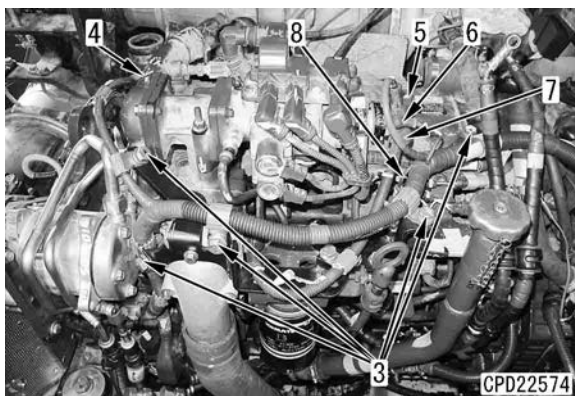
⚠ When disconnecting hoses (14) and (15), always disconnect at the intake manifold side to avoid splashing oil to high temperature area which causes fire.



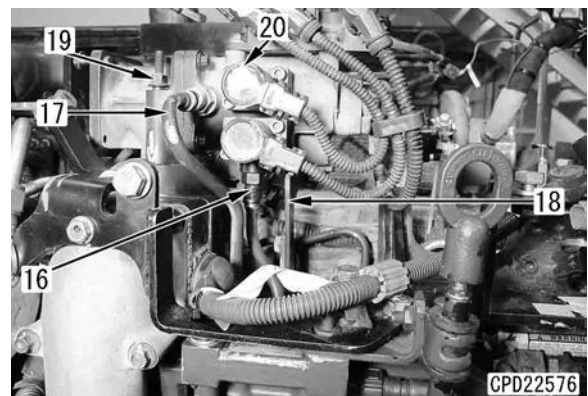
4. Disconnect tubes (16) and (17). [\*2]
5. Remove bracket (18).
6. Remove mounting bolt (19), and remove EGR valve assembly (20). [\*3]

### Removal (D61-AE60-520-K-00-A)

1. Remove engine hood assembly. For details, see "Removal and installation of engine hood assembly".
2. Remove wiring harness clamps (3) (5 pieces), and disconnect the following wiring harness connectors.
  - Connector 23 (4)
  - Terminal T6 (5)
  - Terminal T12 (6)
  - Terminal T5 (7)
  - Ground (8)



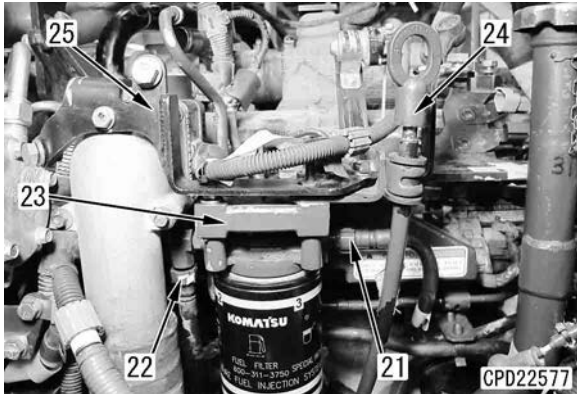
3. Disconnect the following hoses and wiring harness connectors. [\*1]
  - Connector (9)



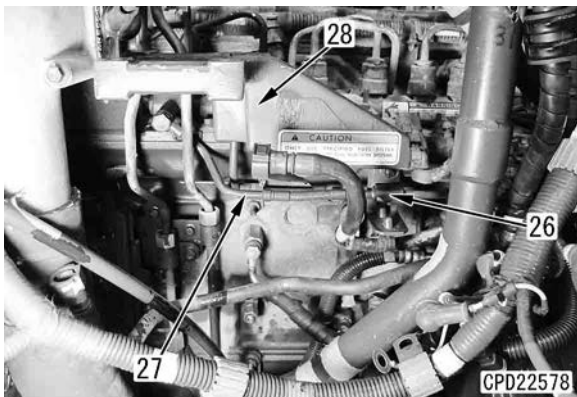
7. Disconnect fuel hoses (21) and (22).
8. Remove fuel filter and bracket (23).
9. Remove oil level gauge (24).
10. Remove bracket (25).

## 50 Disassembly and assembly

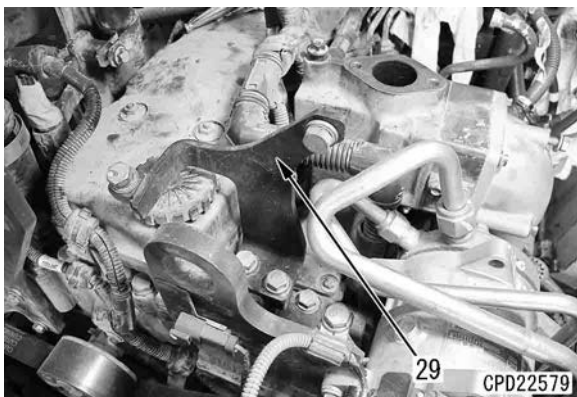
### Engine and cooling system



11. Remove tube clamp (26). [\*4]
12. Disconnect fuel return tube (27). [\*5]
13. Remove bracket (28).

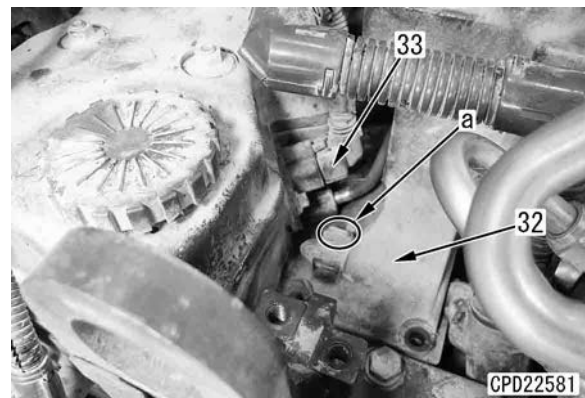
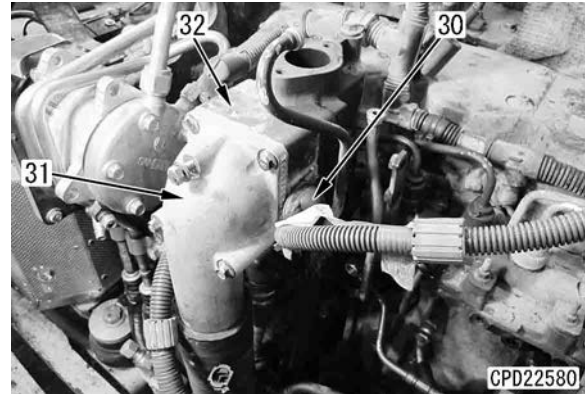


14. Remove bracket (29).

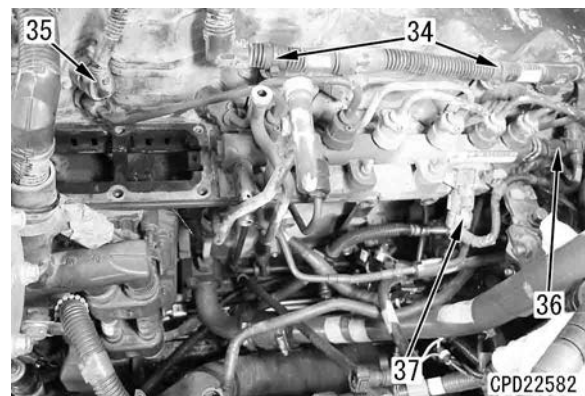


15. Disconnect wiring harness connector RH (30).
16. Disconnect air connector (31). [\*6]
17. Remove air inlet connector (32). [\*7]

★ When removing mounting bolt from part (a) of air inlet connector (32), disconnect front side connector (33) to prevent interference with the tool.



18. Disconnect wiring harness cable ties (34) (2 pieces).
19. Disconnect fuel injector connectors (35) (3 pieces).
20. Disconnect common rail pressure sensor wiring harness connector (36).
21. Disconnect boost temperature and pressure sensor wiring harness connector (37).

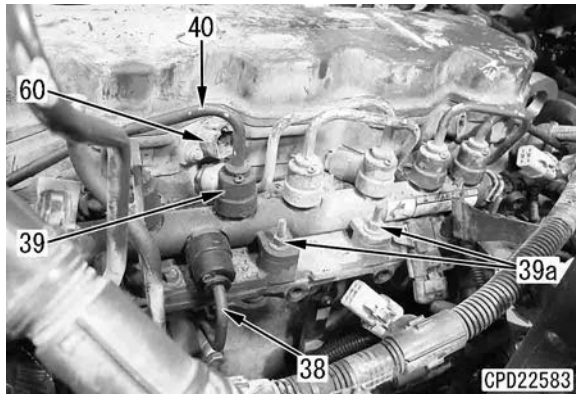


22. Remove mounting bolts and leave fuel injector wiring harness connectors (60) (3 pieces) free. [\*8]

★ This is to prevent interference of the fuel high-pressure pipe sleeve nut tool.

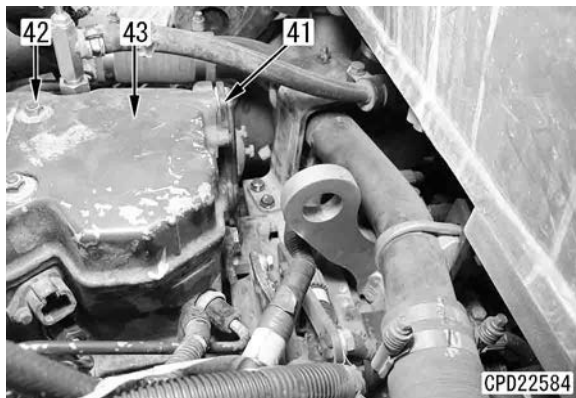
23. Remove fuel spray prevention caps (39) (14 pieces).
24. Remove fuel high-pressure pipes (40) (6 pieces).
25. Remove tube clamp, and disconnect fuel high-pressure pipe (38).

26. Loosen common rail mounting nuts and bolts (39a) (4 pieces).



27. Remove blowby duct (41) from rear of the engine.

28. Remove mounting nuts (42) (6 pieces), and remove cylinder head cover (43).



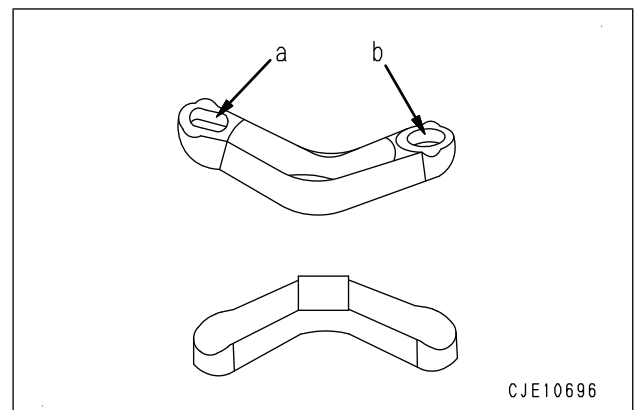
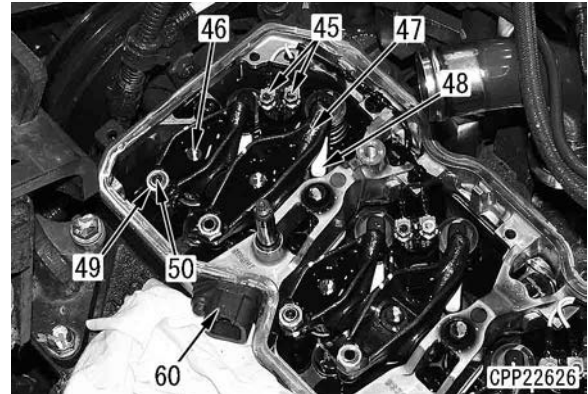
29. Remove wiring harness nut (45) from the fuel injector assembly.

Color of wiring harness	Cylinder No.
White	1, 3, 5
Black	2, 4, 6

- ★ Remove fuel injector wiring harness connector (60) from the rocker housing only when required.

30. Remove mounting bolts (46) (12 pieces), then remove rocker arm assembly (47), crosshead (48), and the rocker arm support.

- ★ Loosen lock nuts (49), and then loosen adjustment screws (50) a few turns each so that excessive force does not apply to the push rods when the rocker arms are installed.
- ★ Record the installed positions and directions of the crossheads (shapes of holes at portions (a) and (b)). (This is necessary to reinstall them in the original directions.)



31. Remove retaining nuts (51), then remove inlet connectors (52) (6 pieces).

- ★ Clean the surrounding area to remove mud and other contamination in advance to prevent them from entering the connector hole.

- ★ Use tool A4 to remove inlet connector (52).

32. Remove mounting bolts (53) of fuel injector assembly (55), then remove holder (54).

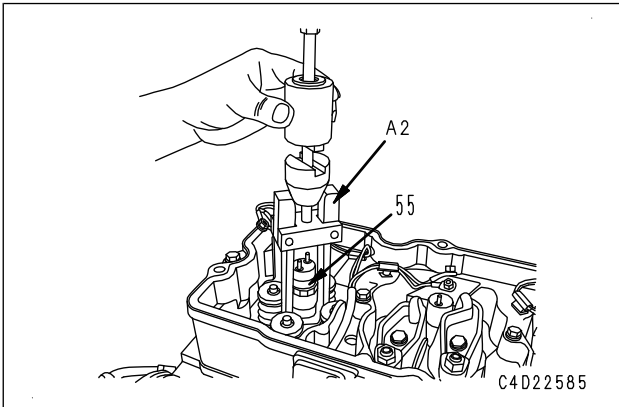
33. Remove fuel injector assembly (55) by using tool A2.

- ★ Be careful that dirt and foreign material do not enter the fuel injector assembly mounting area.



## 50 Disassembly and assembly

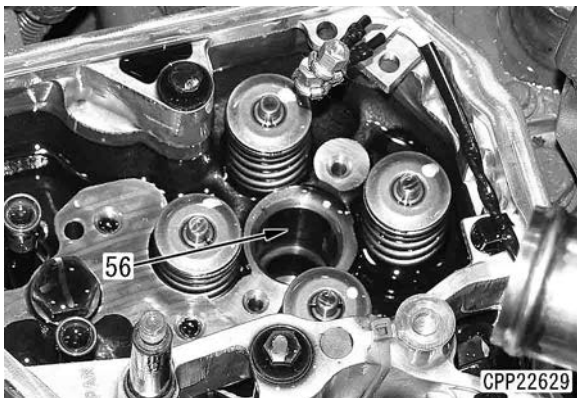
### Engine and cooling system



### Installation (D61-AE60-720-K-00-A)

#### 1. Fuel injector assembly


- ★ When the fuel injector assembly is replaced with a new one, the inlet connector also should be replaced with a new one.
- ★ Check that fuel injector mounting sleeve (56) is free from dirt or other particles.



- 1) Install O-ring (58) and gasket (59) to fuel injector (57).

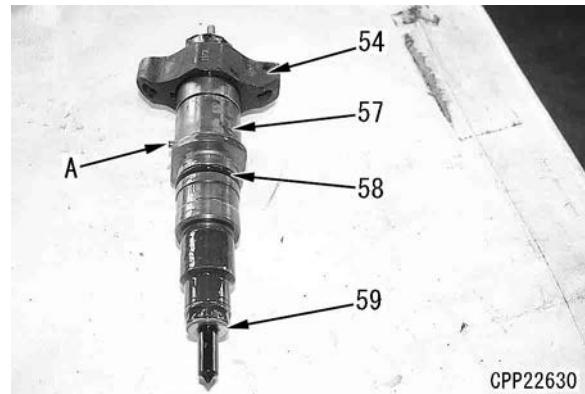
- ★ Replace O-rings and gasket with new ones.

- 2) Apply engine oil to O-ring (58) of fuel injector (57) and the cylinder head side surface.

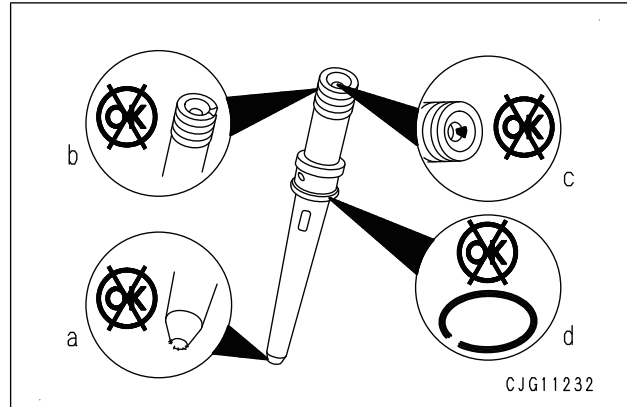
 **O-ring (58) of fuel injector (57) and head side of mounting hole:**

**Engine oil (EO15W-40)**

- 3) While aligning convex and concave shapes at (A), install holder (54) to fuel injector (57).



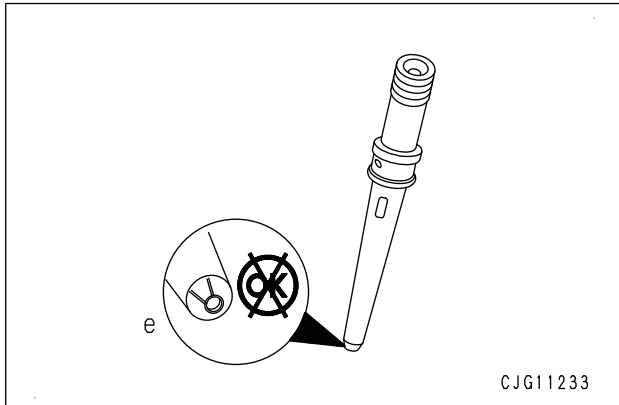
- 4) Install fuel injector assembly (55) into the cylinder head with the fuel inlet hole toward the air intake manifold.
- 5) Tighten holder mounting bolt (53) by 3 to 4 threads.
- 6) Check inlet connector on the following points. If any abnormality is found, replace it.
  - 1] When there are burrs or wear on top-end part (a) or rear-end part (b) of inlet connector.
  - 2] When there is foreign matter on edge filer at rear-end part (c) of inlet connector.
  - 3] Cracks or deterioration are recognizable on the O-ring of the inlet connector upper (d) portion.



- 4] When there is a worn part or an uneven seat contact mark on seat surface (e) at front-end of inlet connector.

- ★ If high-pressure fuel leaks through the inlet connector, seat surface has fine streaks or cracks.





7) Apply engine oil to O-ring (part C) and head side (part B) of inlet connector (52).


 **O-ring of inlet connector and head side of mounting hole:**

**Engine oil (EO15W-40)**

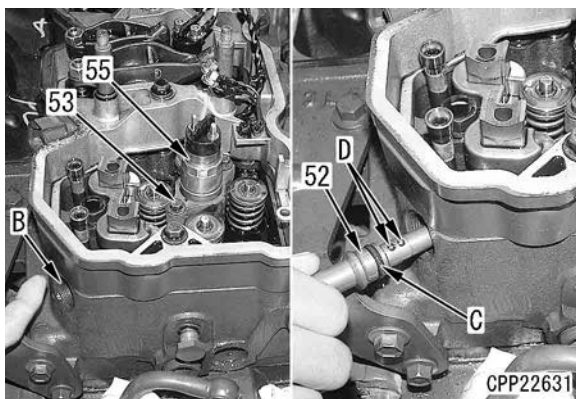
8) Insert inlet connector (52) to the mounting hole of fuel injector assembly (55) and tighten retaining nut (51) lightly.

★ After tightening lightly, it is tightened to the specified torque. Be sure to tighten it to the specified torque in both steps. If a bolt or a nut is tightened insufficiently or too strongly, fuel may leak into the engine.

★ Install inlet connector so that its positioning ball (part D) fits in guide groove part on head side.

 **Retaining nut (51) (tightening lightly):**

**15 ± 5 Nm {1.53 ± 0.51 kgm}**




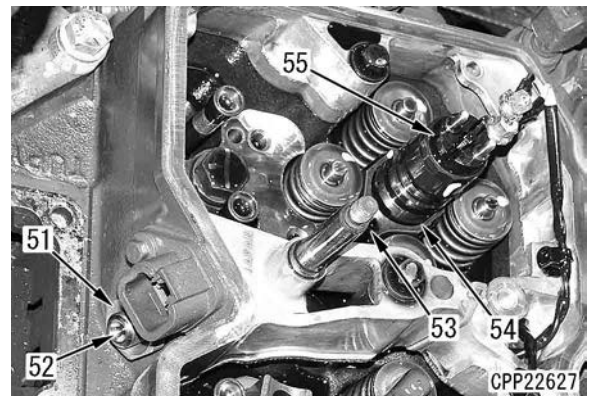
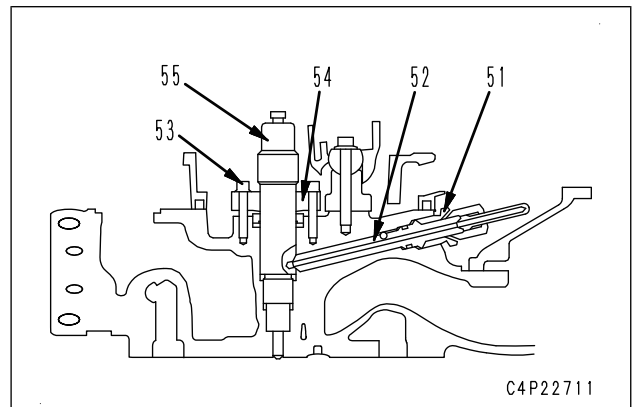
9) Tighten mounting bolts (53) of holder (54) alternately.

 **Holder mounting bolt (53):**

**8 ± 0.8 Nm {0.82 ± 0.08 kgm}**

10) Tighten retaining nut (51) of inlet connector (52).

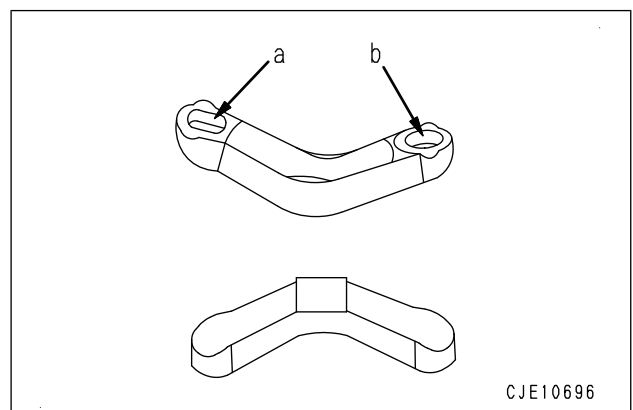
 **Retaining nut (51) (tightening to the specified torque):**  
**50 ± 5 Nm {5.1 ± 0.5 kgm}**



2. Rocker arm and crosshead assembly

1) Install rocker arm assembly (47), crosshead (48), and the rocker arm support.

★ Shape of hole in (a) and (b) portions of cross head is not identical. So when reusing them for the same intake or exhaust valve, be sure to install them in the same direction.



★ Check that spherical portion of adjustment screw (50) is fitted securely to socket of push rod, and then tighten the mounting bolt (46).

## 50 Disassembly and assembly

### Engine and cooling system

#### Mounting bolt (46):

**$36 \pm 5 \text{ Nm}$  { $3.7 \pm 0.5 \text{ kgm}$ }**

2) Adjust the valve clearance.

★ See Testing and adjusting, "Testing and adjusting valve clearance".

3) After adjusting valve clearance, check that lock nut (49) is tightened to the specified torque.

#### Lock nut:

**$24 \pm 4 \text{ Nm}$  { $2.45 \pm 0.41 \text{ kgm}$ }**

4) Install harness mounting nuts (45) of fuel injector assembly (55).

★ Check that wiring harness does interfere with rocker arm.

★ Wiring harness mounting position

Color of wiring harness	Cylinder No.
White	1, 3, 5
Black	2, 4, 6

#### Mounting nut:

**$1.5 \pm 0.25 \text{ Nm}$  { $0.15 \pm 0.03 \text{ kgm}$ }**

★ When installing the currently removed fuel injector wiring harness connector (60), apply liquid gasket to O-ring (61) and flange surface (62) of connector.

★ As for O-ring, apply liquid gasket (f:3 mm in diameter) until O-ring groove is completely hidden.

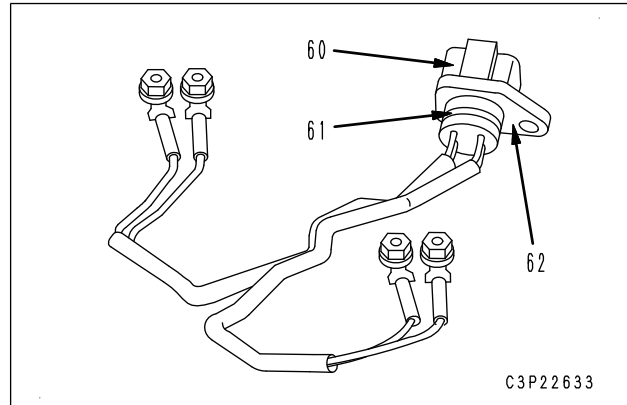
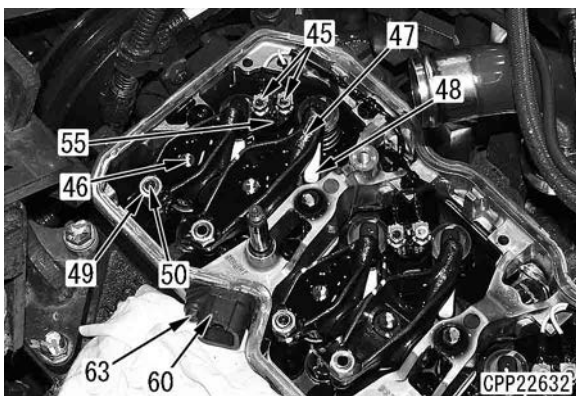
★ When O-ring is damaged, replace an entire wiring harness assembly.

#### O-ring and flange surface of connector:

**Liquid gasket (LG-7)**

#### Connector flange mounting bolt (63):

**$10 \pm 2 \text{ Nm}$  { $1 \pm 0.2 \text{ kgm}$ }**



3. Cylinder head cover

1) Fit the gasket and install cylinder head cover (43).

2) Tighten mounting nut (42).

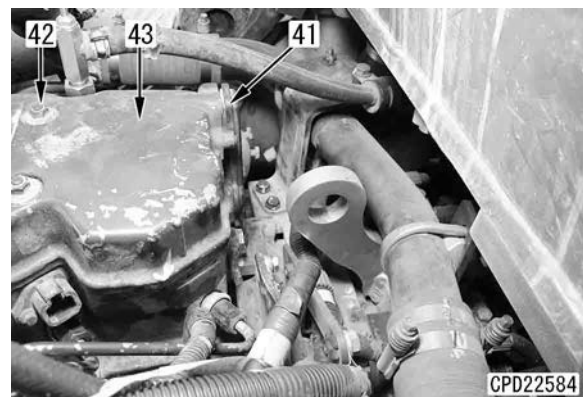
#### Mounting nut (42):

**$24 \pm 4 \text{ Nm}$  { $2.45 \pm 0.41 \text{ kgm}$ }**

3) Install the O-ring and blowby duct (41).

#### Mounting bolt:

**$7 \pm 2 \text{ Nm}$  { $0.7 \pm 0.2 \text{ kgm}$ }**



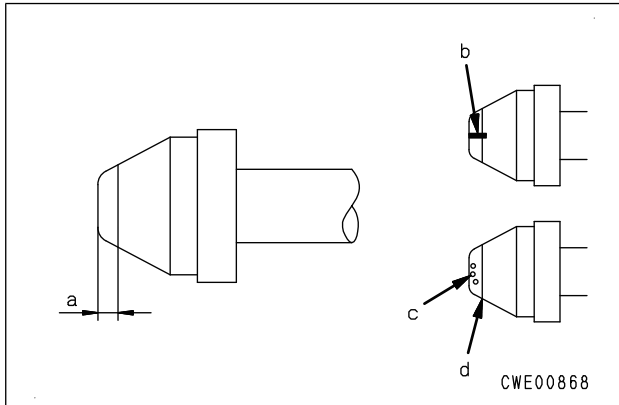
4. Fuel high-pressure pipe

**⚠ Do not bend the fuel high-pressure pipe to correct before installing.**

**⚠ Be sure to use the genuine fuel high-pressure pipe clamp and strictly observe the specified tightening torque.**

**⚠ Install each fuel high-pressure pipe and wiring harness at least 10 mm apart from each other.**

★ A fuel high-pressure pipe may cause fuel leakage if visible lengthwise streaks (b) or spots (c) are found at the joint's taper seal at part (a) (within 2 mm from the end), or the stepped wear at part (d) (2 mm from the end of taper seal) is as severe as it can be felt with a fingernail. If there is any of those defects, replace the fuel high-pressure pipe.



- 1) Tighten common rail mounting nut, bolt (39a), and fuel high-pressure pipes (40a) to (40f) lightly.

 **Mounting nut, bolt, and sleeve nut (lightly tightening):**

**0.2 to 0.8 Nm {0.02 to 0.08 kgm}**

- 2) Tighten fuel high-pressure pipes (40a) to (40f) to the specified torque according to the following procedure.
  - 1] Fuel high-pressure pipes (40a) to (40c):  
In the order from (40a) to (40c), inlet connector side → common rail side
  - 2] Fuel high-pressure pipes (40d) to (40f):  
In the order from (40d) to (40f), inlet connector side → common rail side

 **Sleeve nut:**

**35 ± 3.5 Nm {3.57 ± 0.36 kgm}**

- 3) Lightly tighten fuel high-pressure pipe (38) and tube clamp.
- 4) Tighten fuel high-pressure pipe (38) in the order of supply pump side → common rail side.

 **Sleeve nut:**

**35 ± 3.5 Nm {3.57 ± 0.36 kgm}**

- 5) Tighten common rail mounting nuts and bolts (39a) (4 pieces).

- ★ Apply liquid gasket to threaded portion of bolts (P) (2 pieces) inside engine.

 **Threaded portion of bolt (P):**  
**Liquid gasket (LG-7)**

 **Mounting nut and bolt:**


**24 ± 4 Nm {2.45 ± 0.41 kgm}**

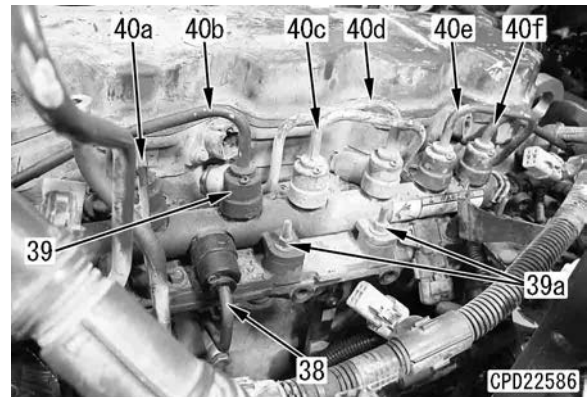
- 6) Fasten tube clamp to the specified torque.

 **Mounting bolt:**

**24 ± 4 Nm {2.45 ± 0.41 kgm}**


- 7) Install fuel spray prevention cap (39).


 **When installing the fuel spray prevention caps, direct their slits outward or downward.**




- Perform subsequent installation in the reverse order to removal.

[\*1]


 **Sleeve nut of hose (14):**  
**15 ± 1 Nm {1.5 ± 0.1 kgm}**

 **Sleeve nut of hose (15):**  
**25 ± 1.5 Nm {2.6 ± 0.15 kgm}**


 **Tube (13) mounting bolt:**  
**24 ± 4 Nm {2.5 ± 0.4 kgm}**

- ★ Replace the gasket with a new one.

[\*2]


 **Sleeve nut of tubes (16) and (17):**  
**25 ± 15 Nm {2.55 ± 0.15 kgm}**

[\*3]


 **Mounting bolt (19):**  
**43 ± 6 Nm {4.4 ± 0.6 kgm}**

- ★ Replace the gasket with a new one.


[\*4]

 **Tube clamp (26) mounting bolt:**  
**24 ± 4 Nm {2.5 ± 0.4 kgm}**

[\*5]


 **Fuel return tube (27) joint bolt:**  
**24 ± 4 Nm {2.5 ± 0.4 kgm}**

[\*6]

 **Air connector (31) mounting bolt:**  
**24 ± 4 Nm {2.5 ± 0.4 kgm}**

★ Replace the gasket with a new one.

[\*7]


 **Air inlet connector (32) mounting bolt:**  
**24 ± 4 Nm {2.5 ± 0.4 kgm}**

★ Replace the gasket with a new one.

★ When installing the gasket, the part No. tag position (b) must be placed at the rear of the engine.



[\*8]

 **Fuel injector harness connector (60) mounting bolt:**  
**10 ± 2 Nm {1.0 ± 0.2 kgm}**

- Checking for fuel leakage (fuel system)  
Check the fuel system for leakage. For details, see Testing and adjusting, "Checking fuel circuit for leakage".
- Bleeding air (fuel system)  
Bleed air from the fuel circuit. For details, see Testing and adjusting, "Bleeding air from fuel circuit".

## Removal and installation of cylinder head assembly (D61-A100-924-K-00-A)

★ Special tools

Symbol	Part No.	Part name	Necessity	Qty	
A	2	795-799-6700	Puller	■	1
	4	795-799-8150	Remover	●	1
	5	790-331-1120	Wrench (angle)	●	1
	6	795-790-4510	Gauge	●	1
	12	Commercially available	Long socket (7/16 inches)	●	1

⚠ Place machine on a level ground, and set parking brake lever to LOCK position.

⚠ Lower the work equipment to the ground, and set the work equipment lock lever to LOCK position.

⚠ Turn the starting switch to OFF position, and stop the engine.

⚠ Turn the battery disconnect switch to OFF position, and remove the key. (For details, see Testing and adjusting, "Handling of battery disconnect switch".)

⚠ If you drain the coolant when it is still hot, you may be scalded. Wait until the coolant temperature drops before starting the work.

### Removal (D61-A100-520-K-00-A)

- Remove engine hood assembly. For details, see "Removal and installation of engine hood assembly".
- Collect refrigerant (R134a) from the air conditioner circuit. For details, see "Removal and installation of air conditioner compressor assembly". [\*1]

★ Ask a qualified person for collecting, adding and filling operations of the refrigerant. (Only registered persons can work.)

★ Never release the refrigerant to the atmosphere.

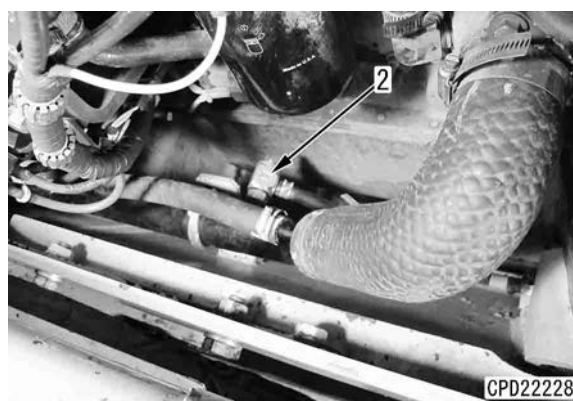
⚠ If refrigerant gets in your eyes, you may lose your sight. And if it touches your skin, you may suffer from frostbite. Accordingly, put on the protective eyeglasses, gloves and working suits with long sleeves while you are collecting or filling the refrigerant.

- Refrigerant to be collected: 900 ± 50 g

- Remove engine hood right side cover (1).

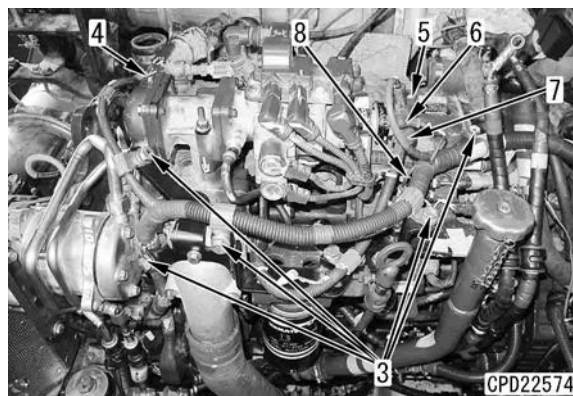
- Loosen coolant drain valve (2) to drain the coolant.

 **Radiator:**  
45 ℓ



- Remove wiring harness clamps (3) (5 pieces) and disconnect the following wiring harness connectors.

- Connector 23 (4)
- Terminal T6 (5)
- Terminal T12 (6)
- Terminal T5 (7)
- Ground (8)



- Disconnect the following hoses and wiring harness connectors. [\*2]

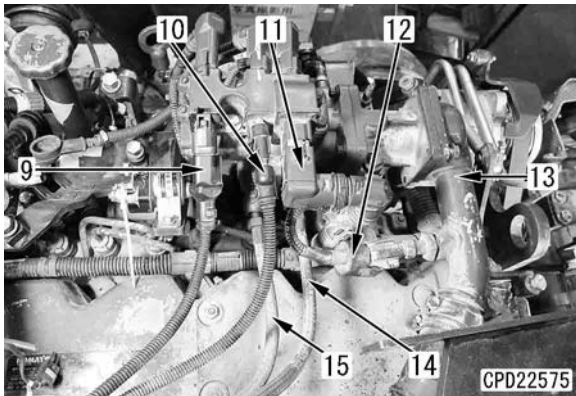
- Connector (9)
- Connector (10)

## 50 Disassembly and assembly

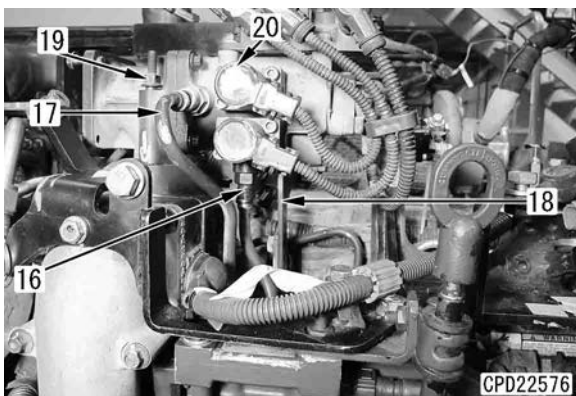
### Engine and cooling system

- Connector (11)
- Connector (12)
- Tube (13)
- Hose (14) (KVGT drive hydraulic circuit)
- Hose (15) (KVGT control pressure circuit)

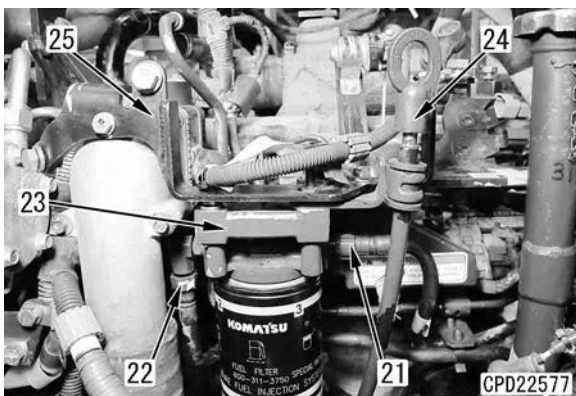
**⚠ When disconnecting hoses (14) and (15), always disconnect at the intake manifold side to avoid splashing oil to high temperature area which causes fire.**



7. Disconnect tubes (16) and (17). [\*3]
8. Remove bracket (18).
9. Remove mounting bolt (19), and remove EGR valve assembly (20). [\*4]

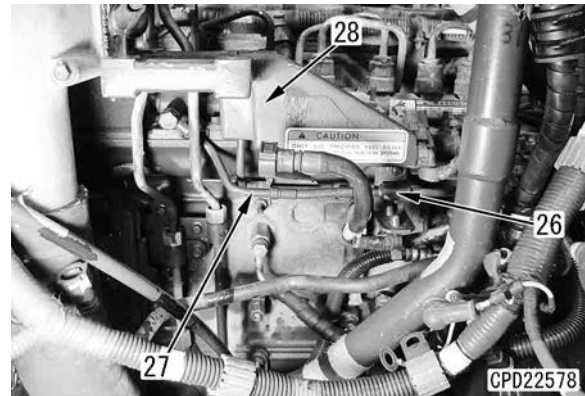


10. Disconnect fuel hoses (21) and (22).
11. Remove fuel filter and bracket (23).
12. Remove oil level gauge (24).
13. Remove bracket (25).

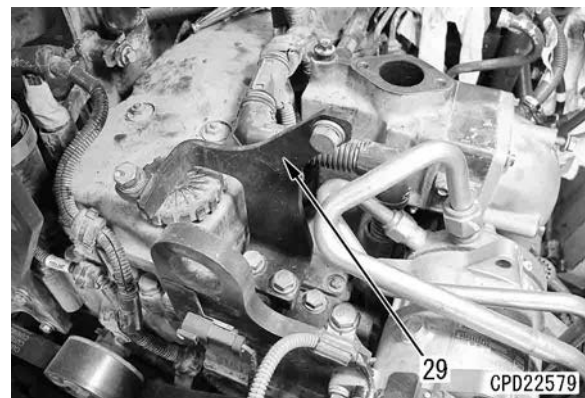


14. Remove tube clamp (26). [\*5]

15. Disconnect fuel return tube (27). [\*6]
16. Remove bracket (28).



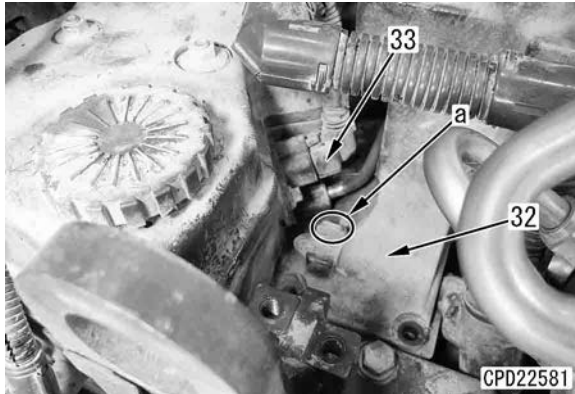
17. Remove bracket (29).



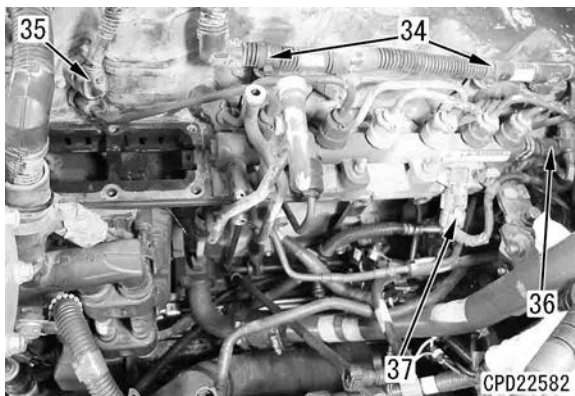
18. Disconnect wiring harness connector RH (30).
19. Disconnect air connector (31). [\*7]
20. Remove air inlet connector (32). [\*8]

★ When removing mounting bolt from part (a) of air inlet connector (32), disconnect front side connector (33) to prevent interference with the tool.





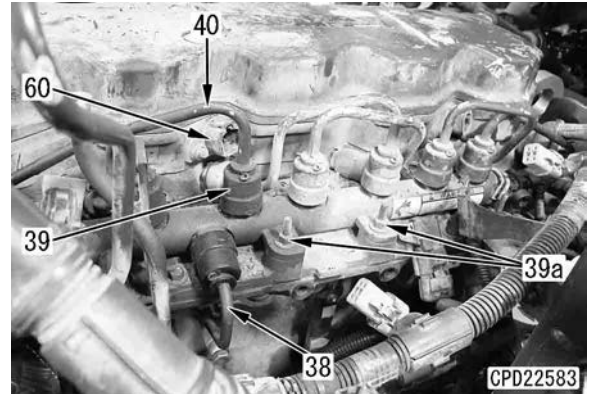
21. Disconnect wiring harness cable ties (34) (2 pieces).
22. Disconnect fuel injector connectors (35) (3 pieces).
23. Disconnect common rail pressure sensor wiring harness connector (36).
24. Disconnect boost temperature and pressure sensor wiring harness connector (37).



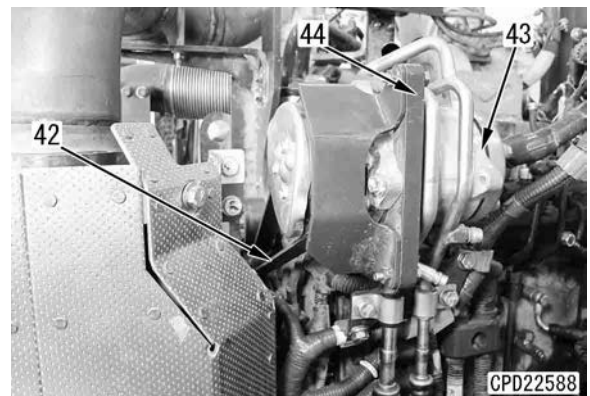
25. Remove mounting bolts and leave fuel injector wiring harness connectors (60) (3 pieces) free. [\*9]

★ This is to prevent interference of the fuel high-pressure pipe sleeve nut tool.

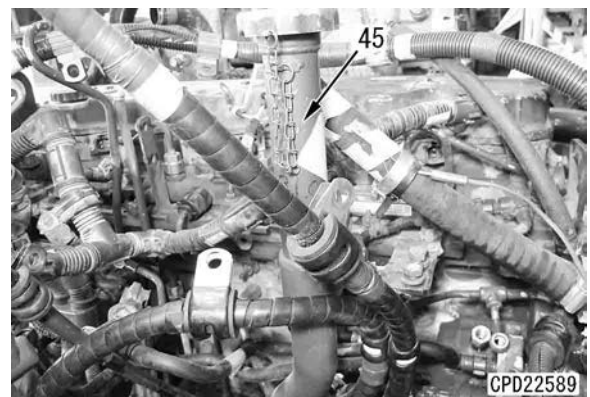
26. Remove fuel spray prevention caps (39) (14 pieces).
27. Remove fuel high-pressure pipes (40) (6 pieces).
28. Remove tube clamp, and disconnect fuel high-pressure pipe (38).
29. Loosen common rail mounting nuts and bolts (39a) (4 pieces).



30. Remove alternator and air conditioner compressor belt (42). For details, see "Removal and installation of alternator and air conditioner compressor belt". [\*10]
31. Remove air conditioner compressor assembly (43). For details, see "Removal and installation of air conditioner compressor assembly". [\*11]
32. Remove bracket (44).



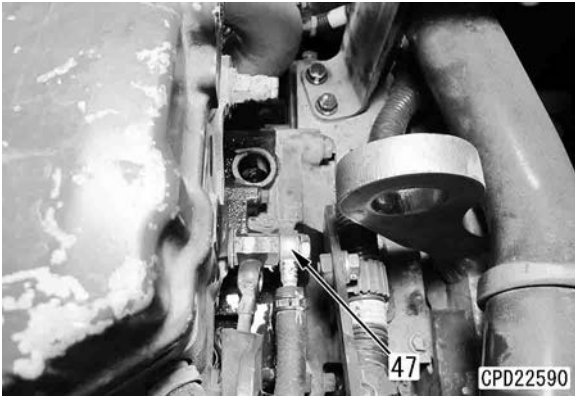
33. Remove oil filler tube (45).



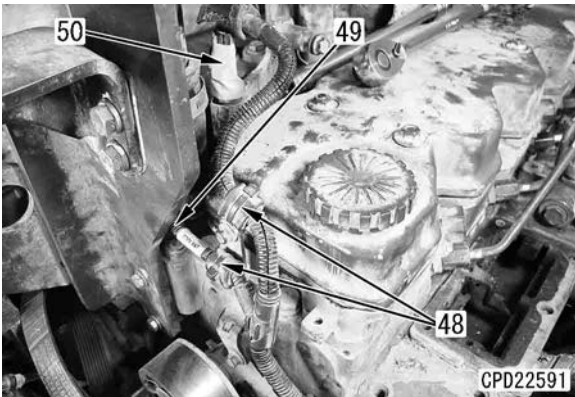
34. Remove fuel return hose joint bolt (47). [\*12]

## 50 Disassembly and assembly

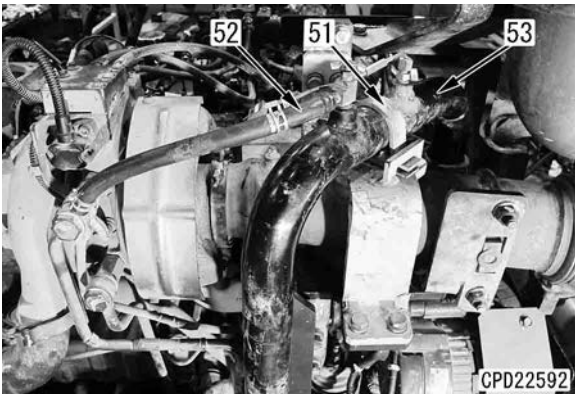
### Engine and cooling system



35. Remove wiring harness clamps (48) (2 pieces).  
36. Disconnect wiring harness connector (49) and exhaust manifold pressure sensor connector (50).



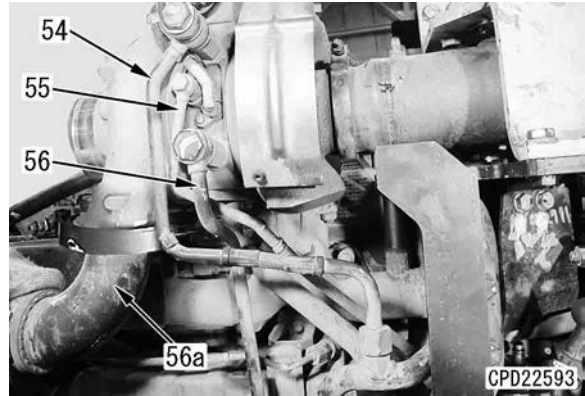
37. Remove bracket (51).  
38. Disconnect water hoses (52) and (53). [\*13]



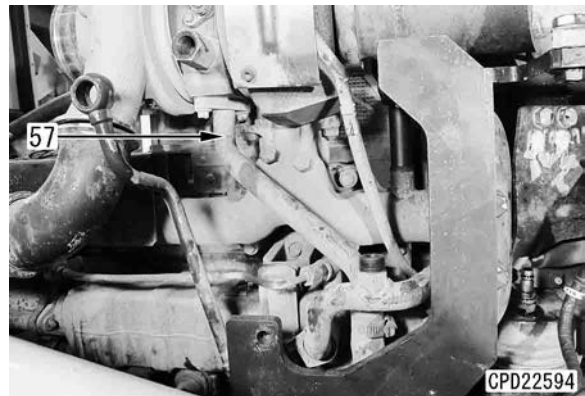
39. Disconnect the following tubes. [\*14]

- Tube (54)
- Tube (55)
- Tube (56)

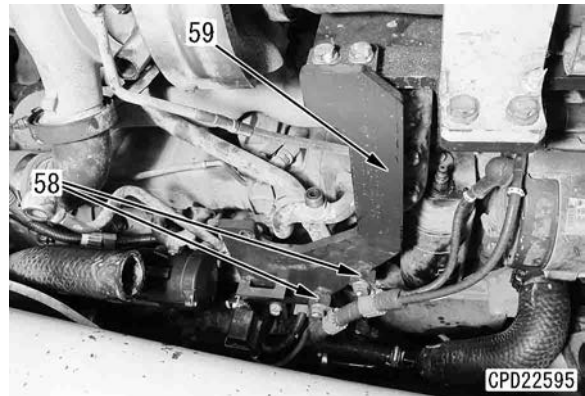
40. Disconnect air tube (56a).



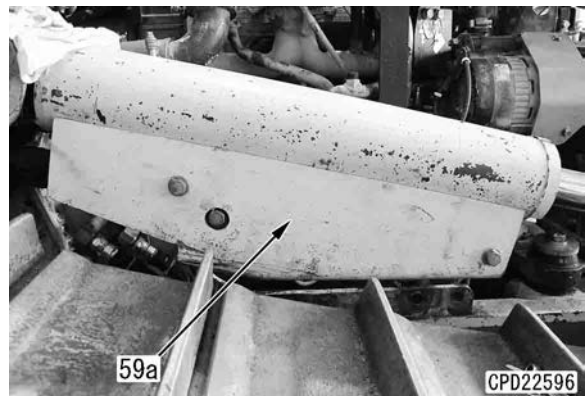
41. Disconnect drain tube (57). [\*15]



42. Remove wiring harness clamps (58) (2 pieces), and remove bracket (59).



43. Remove right blade lift cylinder cover (59a).



44. Disconnect the following tubes. [\*16]

- Tube (61)