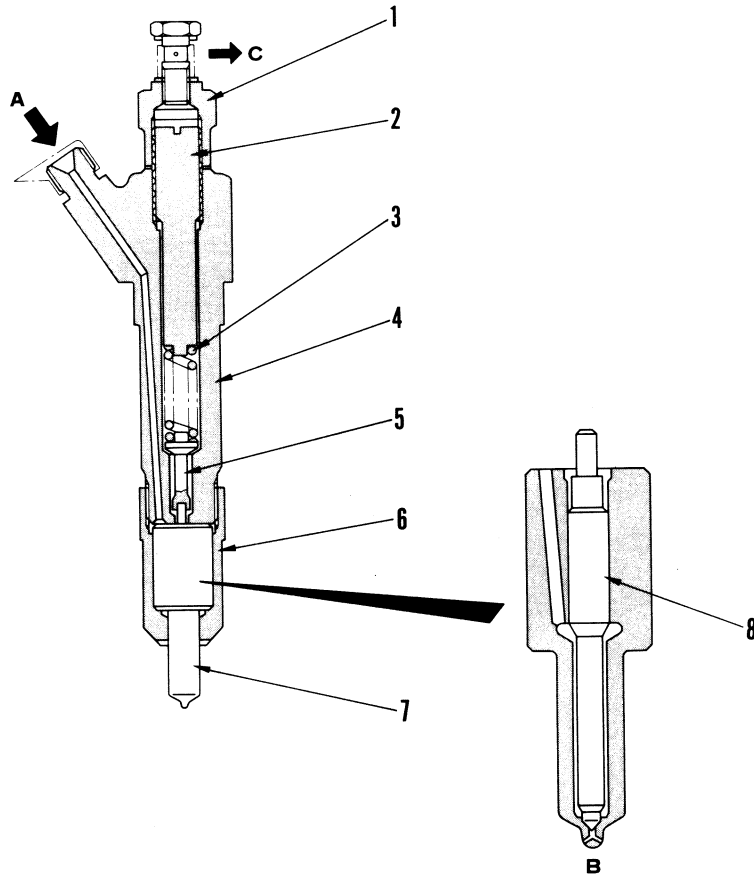


Engine No. 50001 and up



6138F119

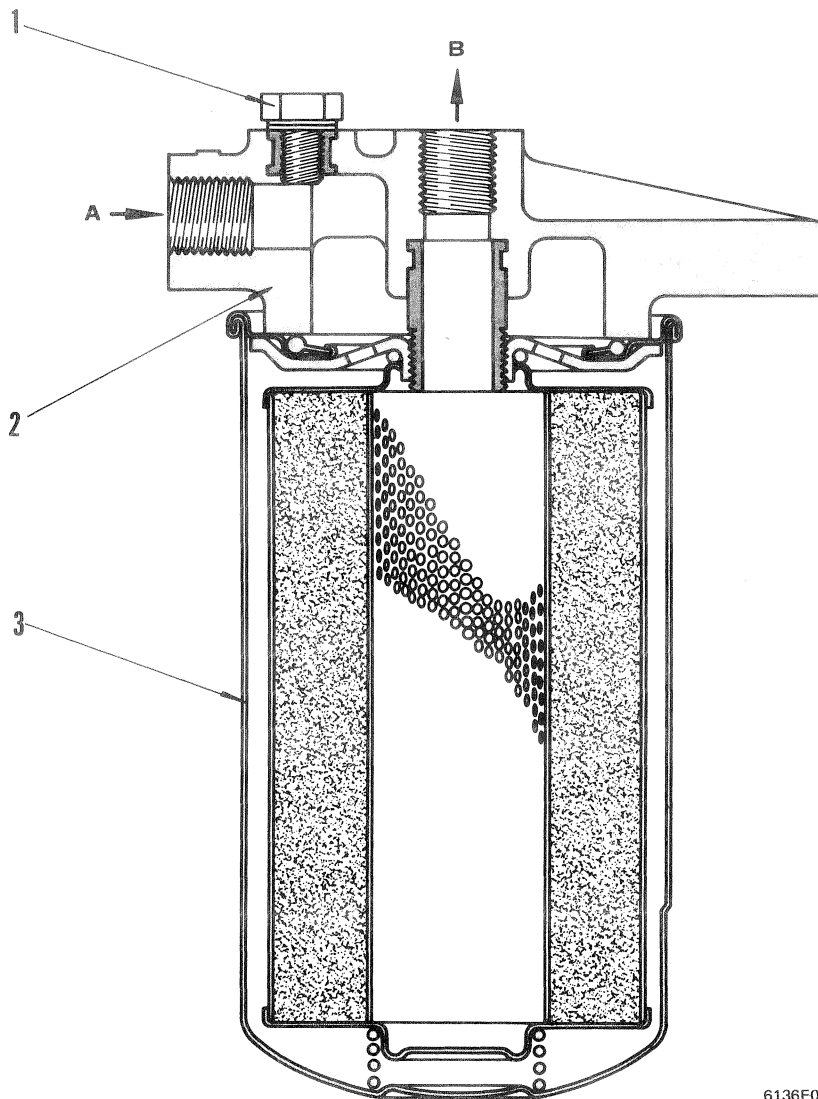
1. Nozzle holder cap
2. Adjust screw
3. Nozzle spring
4. Nozzle holder body
5. Push rod
6. Nozzle cap
7. Nozzle body
8. Needle valve

- A. From fuel pump  
 B. To combustion chamber  
 C. To fuel tank

#### Fuel injection nozzle

- Type: DIESEL KIKI
- Fuel injection pressure: 225 kg/cm<sup>2</sup>

## FUEL FILTER



1. Air bleeding plug

2. Filter bracket

3. Cartridge

A. From feed pump

B. To fuel injection pump

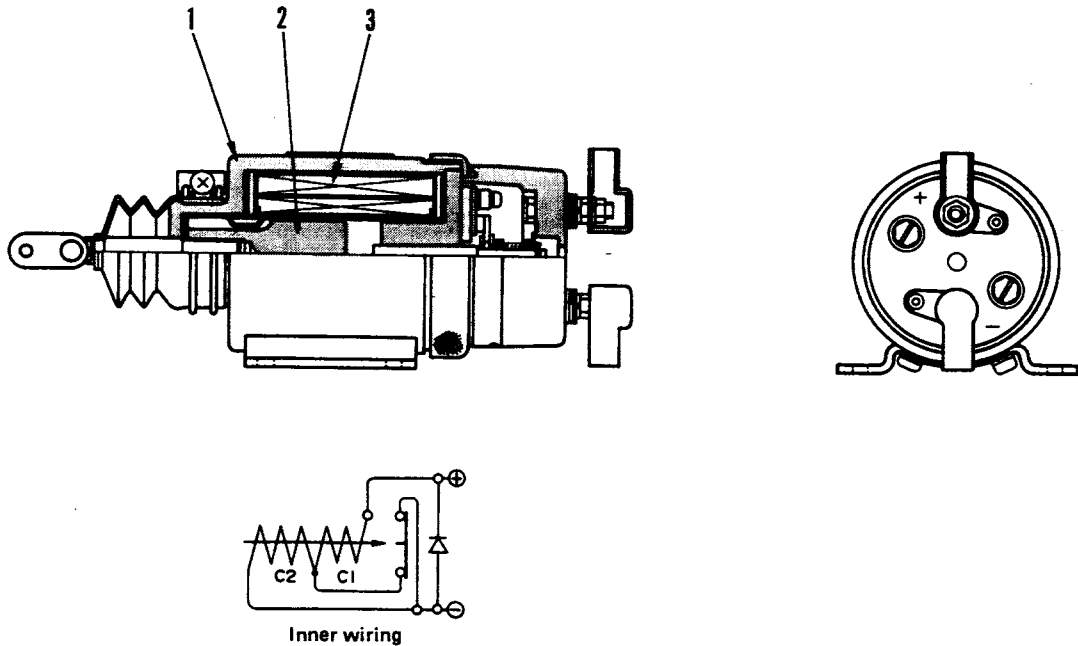
**Fuel filter**Fuel filter effective area:  $0.3 \text{ m}^3$ 

6136F020

**Function**

- The fuel filter is a cartridge type and serves to remove dust, foreign substances of the fuel through filter-paper from the feed pump.
- When fuel is contaminated with water, the water will be separated from the fuel while flowing through the filter, resulting in accumulated water in the lower part of filter.

## FUEL CUT SOLENOID



6150F134

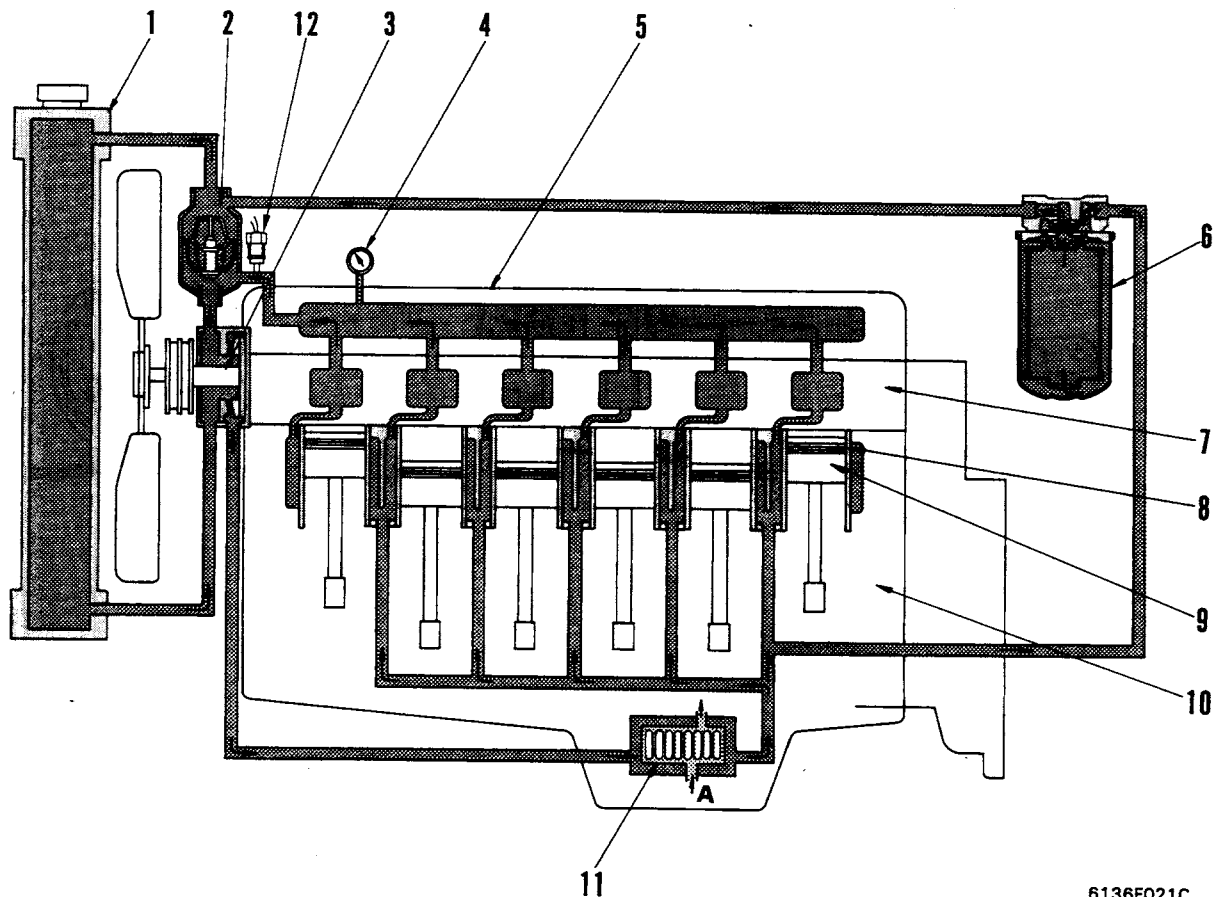
1. Case
2. Piston
3. Coil

**MAGNETIC SWITCH**

- Marker: NIKKO DENKI
- Type: Sealed
- Rated voltage: DC24V
- Operating current
  - Maximum: 35A max.
  - Continuity: 0.5A max.
- Stroke:  $12 \pm 0.1$  mm
- Weight: 2.7 kg

# COOLING SYSTEM

## COOLING SYSTEM CHART



6136F021C

- |   |   |
|---|---|
| 1. Radiator   | 8. Cylinder liner   |
| 2. Thermostat   | 9. Piston   |
| 3. Water pump   | 10. Cylinder block  |
| 4. Water temperature gauge                            | 11. Oil cooler  |
| 5. Water manifold (integrated with the cylinder head) | 12. Thermo sensor<br>(for PC200-3, PC220-3, PC200LC-3, PC220LC-3) |
| 6. Corrosion resistor                                 | A. From oil pump (Oil)  |
| 7. Cylinder head                                      |   |

### GENERAL DESCRIPTION

#### 1. Structure of cooling system

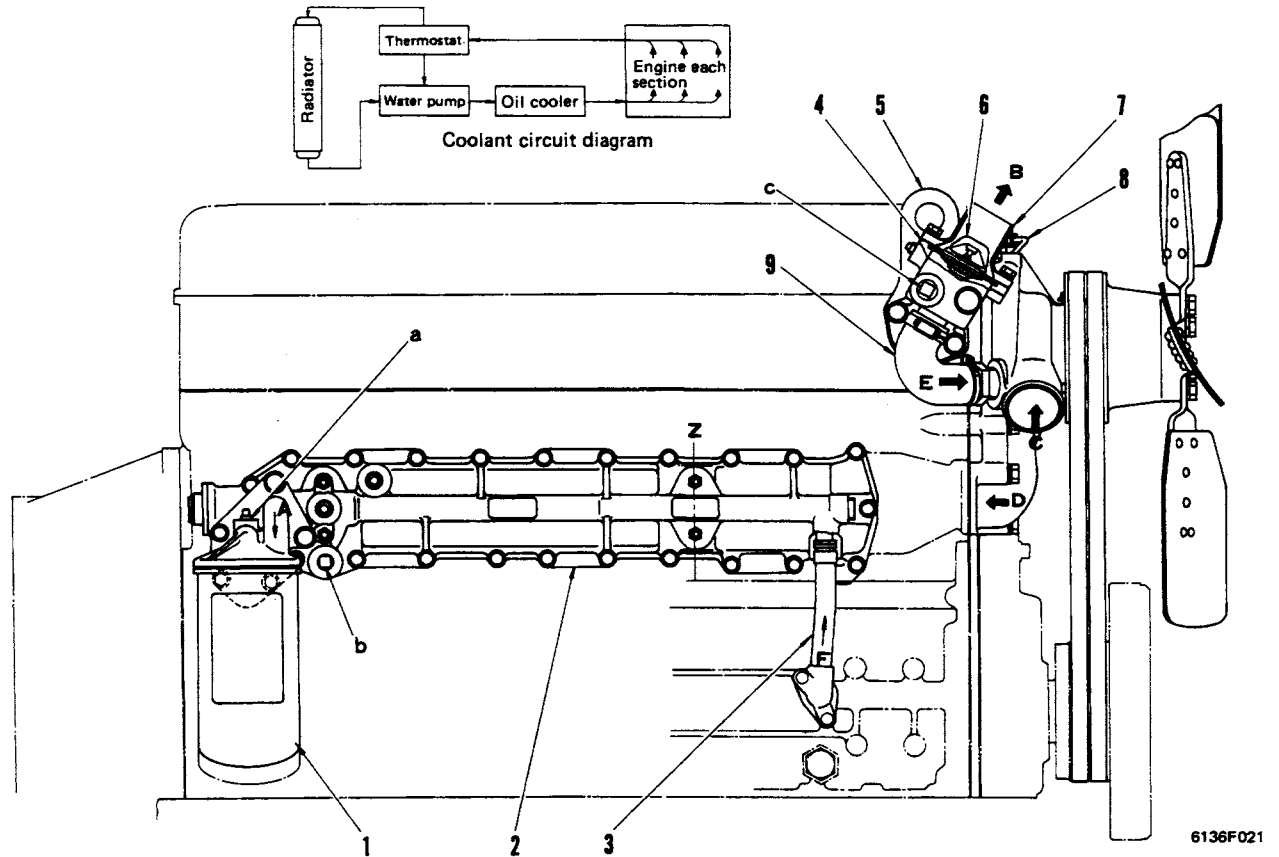
- The cooling system consists of the water pump, thermostat, radiator, fan and water piping. It serves to cool the cylinder liners, and the areas surrounding the combustion parts in the cylinder heads.
- In addition, oil cooler is equipped for cooling oil by the engine cooling water.

#### 2. Circulation of cooling water

- 1) The cooling water is distributed under pressure from the water pump driven together with the fan through the fan belt from the crank pulley.
- 2) The cooling water distributed under pressure from the water pump passes through the oil cooler, cools various parts in the engine, collects in the cylinder heads, and from there flows into the thermostat.

- 3) The cooling water in thermostat will flow back to the water pump, when the water temperature is below approx. 76°C. If the water temperature is over approx. 90°C or so, the thermostat will be opened fully, causing the water to flow into the radiator for cooling.
- 4) While the water temperature ranges from 76° to approx. 90°C, some of the water flows back to the water pump and the other to the radiator. The ratio of water flowing to the pump and the radiator depends on the degree of opening (varying with the temperature) of the thermostat.

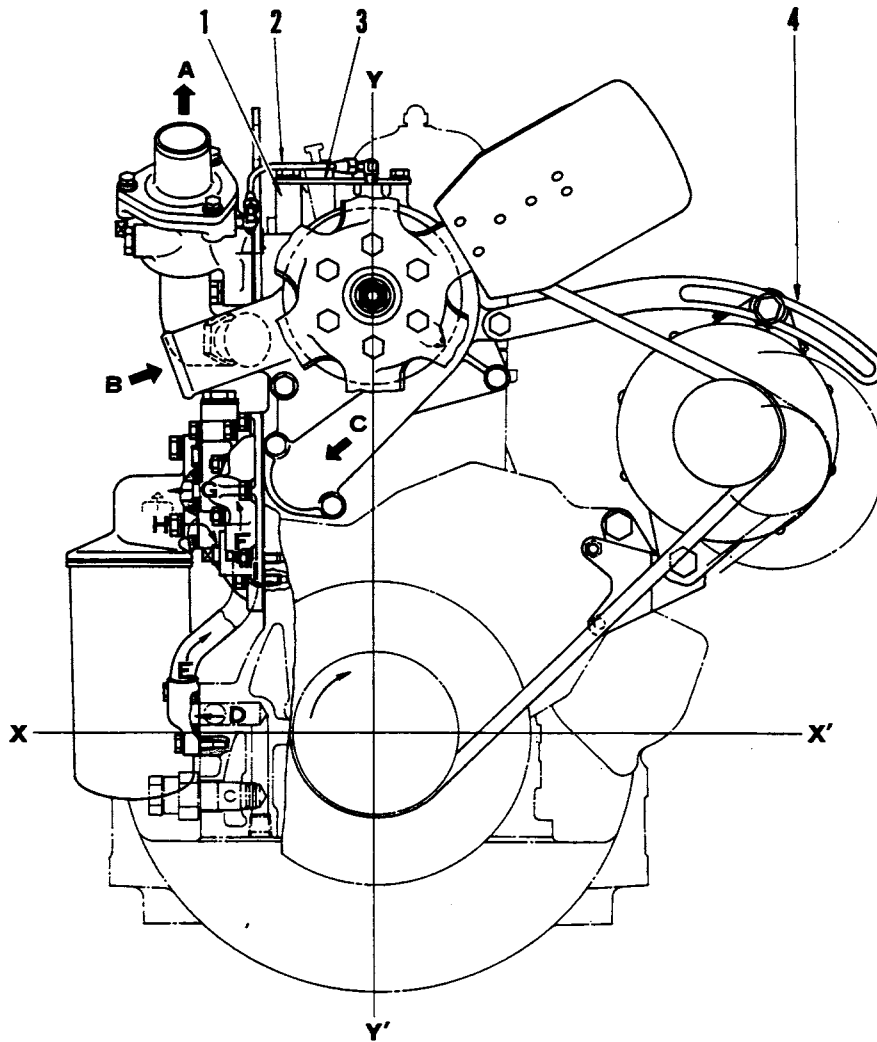
6D105-1 for W70



- |                       |                              |
|-----------------------|------------------------------|
| 1. Oil filter         | A. From oil cooler (oil)     |
| 2. Oil cooler         | B. To radiator (water)       |
| 3. Oil pipe           | C. From radiator (water)     |
| 4. Thermostat housing | D. To oil cooler (water)     |
| 5. Slinger            | E. To engine (water)         |
| 6. Thermostat         | F. From oil pump (oil)       |
| 7. Water connector    |                              |
| 8. Water tube         | a. Oil pressure takeout port |
| 9. Water hose         | b. Water drain plug          |
|                       | c. Car heater takeout port   |

**Thermostat**

Temperature when start to open:	76.5° C
Temperature when full open:	90° C
Full opening life:	10 mm



- 1. Spacer
- 2. Water tube
- 3. Bracket
- 4. Adjust plate
- 5. Fan
- 6. Fan pulley
- 7. Fan belt
- 8. Water pump
- 9. Alternator
- 10. Alternator bracket

- A: To radiator (water)
- B: From radiator (water)
- C: To engine each section (water)
- D: From oil pump (oil)
- E: To oil cooler (oil)
- F: From oil cooler (oil)
- G: To oil filter (oil)
- H: From oil filter (oil)
- I: To engine each section (oil)
- J: To radiator
- X-X': Center of crankshaft
- Y-Y': Center of cylinder