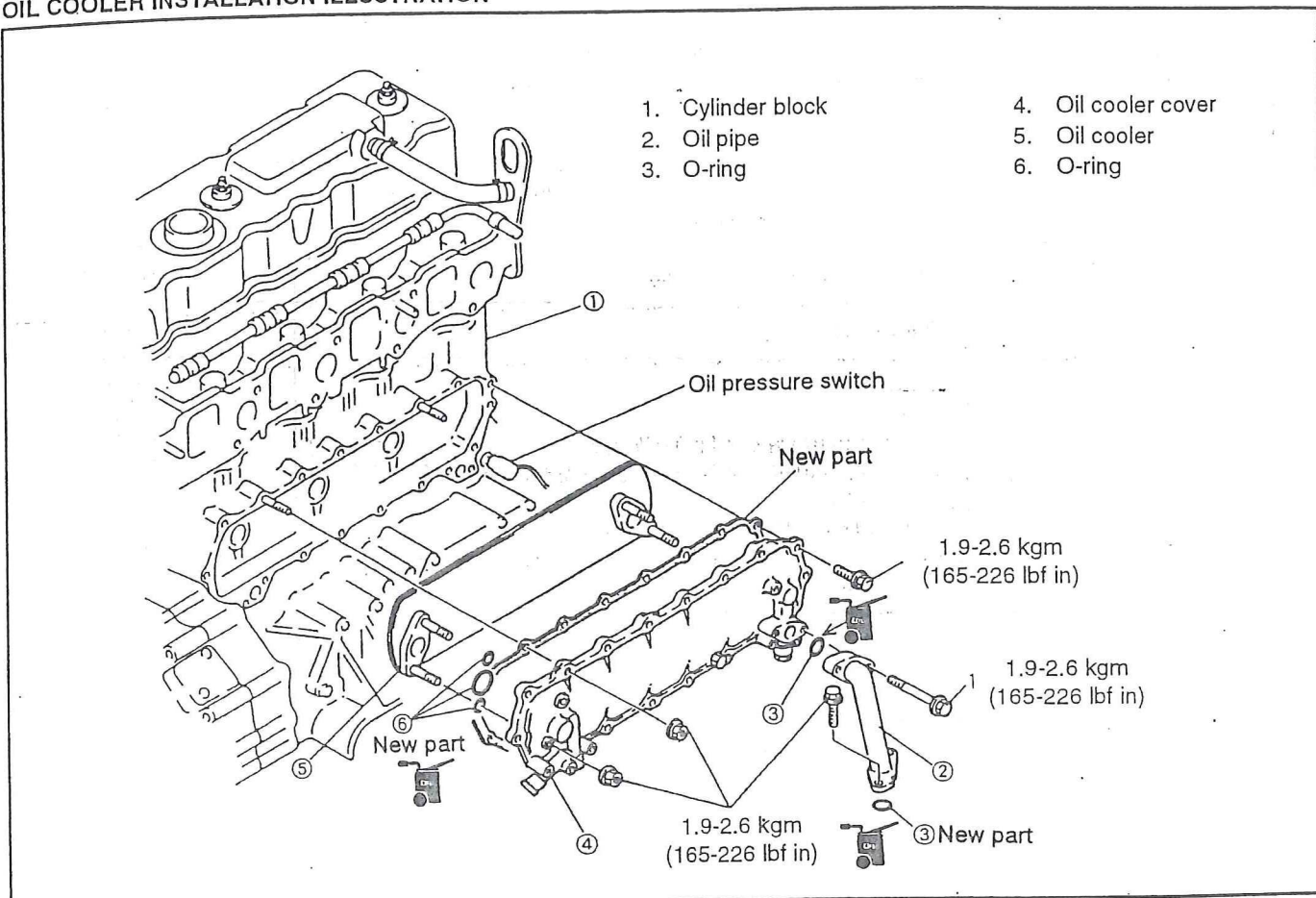


## OIL COOLER INSTALLATION ILLUSTRATION

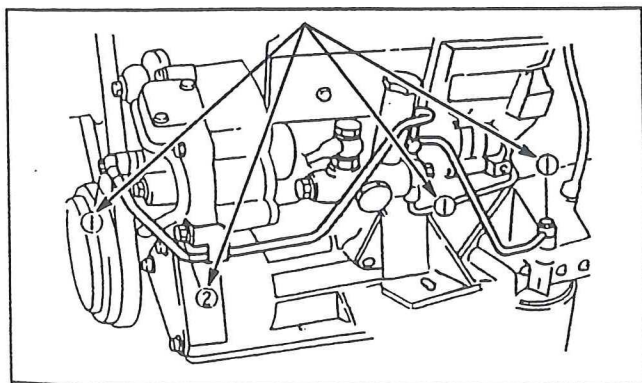


## OIL LINE AND OIL PIPE INSTALLATION

1. Install the oil lines, using new sealing washers.

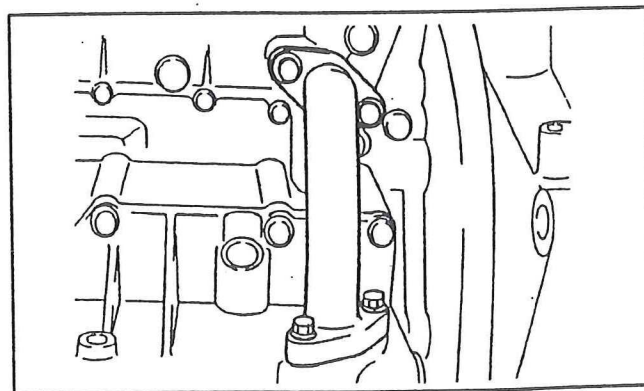
Tightening torque:

- ① 1.0-1.3 kgm / (87-113 lbf in)
- ② 1.9-2.6 kgm / (165-226 lbf in)



2. Install the oil pipe, using new O-rings and gaskets.

Tightening torque: 1.9-2.6 kgm / (165-226 lbf in)



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TROUBLESHOOTING GUIDE

Problems	Possible causes	Remedy
Hard starting Engine spins slowly	<ul style="list-style-type: none"> <li>* Deterioration of oil</li> <li>* Insufficient oil</li> </ul>	Replace Refill
Excessive oil consumption	<ul style="list-style-type: none"> <li>* Wear or sticking of piston ring or piston ring grooves</li> <li>* Wear of piston or cylinder</li> <li>* Defective valve seal</li> <li>* Wear in valve stem or guide</li> </ul>	Replace Replace Replace Replace
	Oil leakage	Repair
Decrease in oil pressure	<ul style="list-style-type: none"> <li>* Insufficient oil</li> <li>* Oil leak</li> <li>* Wear or damage of oil pump rotor</li> <li>* Wear of plunger (in oil pump body) or fatigue of plunger spring</li> <li>* Clogged oil strainer</li> <li>* Excessive clearance in main bearing and connecting rod bearing</li> </ul>	Refill Repair Replace Replace  Clean Repair
Oil warning lamp lights during engine operation	<ul style="list-style-type: none"> <li>* Drop in oil pressure</li> <li>* Insufficient oil</li> <li>* Defective oil pressure switch</li> <li>* Defective oil level sensor (if equipped)</li> <li>* Defect in electrical system</li> </ul>	Same as above Refill Replace Replace Repair

## NOTES

DEC 1950

1. The first part of the report deals with the general situation of the country and the progress of the work during the year. It is a summary of the work done and the results obtained. It is a general overview of the work done and the results obtained.

2. The second part of the report deals with the specific work done during the year. It is a detailed account of the work done and the results obtained. It is a detailed account of the work done and the results obtained.

3. The third part of the report deals with the conclusions drawn from the work done during the year. It is a summary of the conclusions drawn from the work done and the results obtained. It is a summary of the conclusions drawn from the work done and the results obtained.

4. The fourth part of the report deals with the recommendations made for the future work. It is a summary of the recommendations made for the future work. It is a summary of the recommendations made for the future work.

5. The fifth part of the report deals with the bibliography. It is a list of the books and articles referred to in the report. It is a list of the books and articles referred to in the report.

5

COOLING SYSTEM

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**SECTION 5 – CONTENTS**

**COOLING SYSTEM**

**DESCRIPTION**

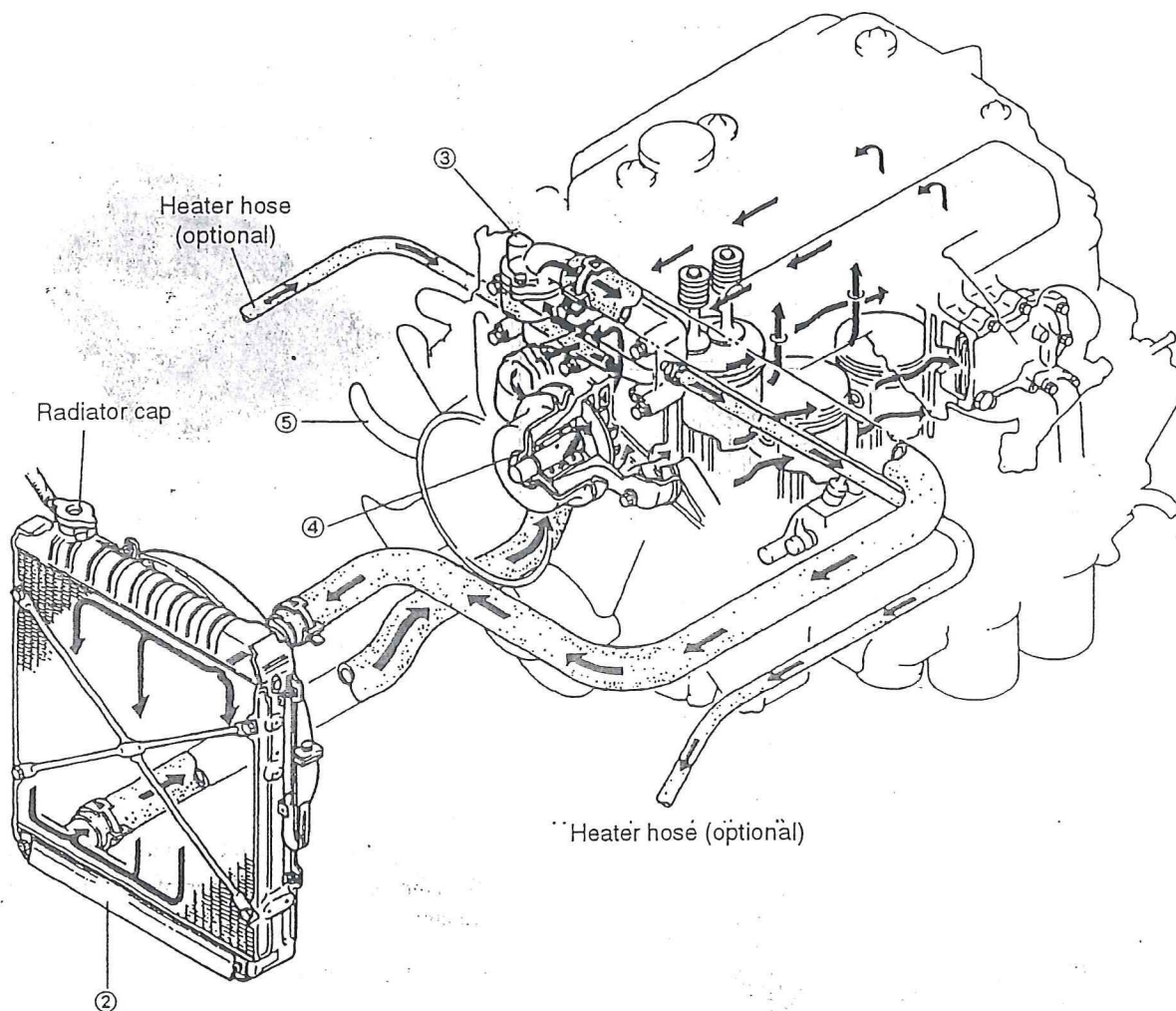
**PAGE NUMBER**

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COOLING SYSTEM SPECIFICATIONS .....	5-2
ENGINE BLOCK COOLING SYSTEM COMPONENTS .....	5-2
THERMOSTAT INSPECTION .....	5-2
WATER PUMP .....	5-3
WATER PUMP DESCRIPTION .....	5-3
WATER PUMP SPECIFICATIONS .....	5-3
TROUBLESHOOTING GUIDE .....	5-4





## COOLING SYSTEM DIAGRAM



- |                 |                |
|-----------------|----------------|
| 1. Radiator Cap | 4. Water pump  |
| 2. Radiator     | 5. Cooling fan |
| 3. Thermostat   |                |

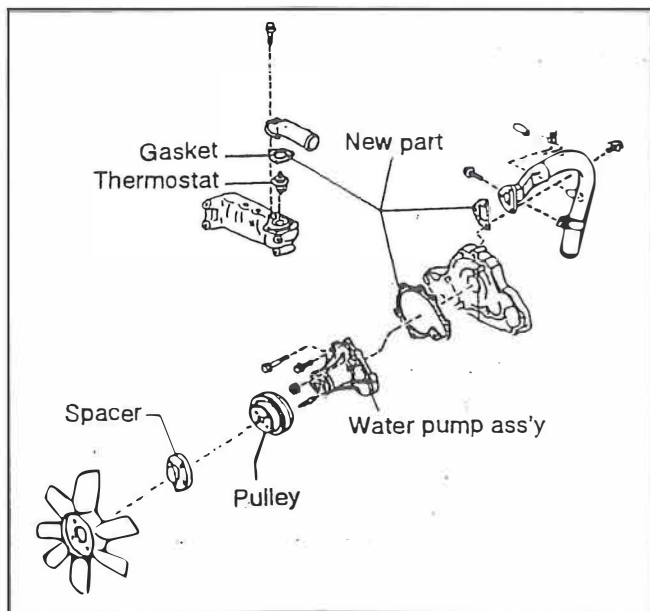
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### COOLING SYSTEM SPECIFICATIONS

Cooling method	Water-cooled, V belt driven pump	
Cooling system capacity (Complete system)	17 litres (17.97 qt)	
Cooling system capacity (Engine only)	9.8 litres (10.36 qt)	
Thermostat	Temperature at which thermostat begins opening valve	82°C 180°F
	Temperature at which the valve is completely opened	94°C 201°F
	Minimum lifting amount of fully opened valve	9.1 mm (.3583 in)
Water pump type	Centrifugal type	
Cooling fan number of blades	7	
Cooling fan diameter	460 mm / (18.1 in)	
Fan belt tension (After belt break in) Deflection: @ 10 kg / (22 lb) pressure.	11-12 mm (.433-.472 in)	

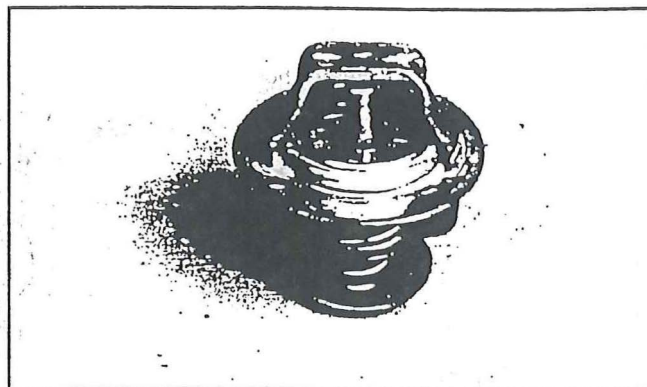
### ENGINE BLOCK COOLING SYSTEM COMPONENTS



### THERMOSTAT INSPECTION

#### 1. Removal

- (1) Remove the mounting bolts, and then remove the thermostat cover.
- (2) Remove the thermostat gasket. Remove the thermostat from the thermostat casing.



#### 2. Inspection

- (1) Visually inspect the thermostat. Check that the valve is closed at room temperature. Replace the thermostat if the valve is not closed properly.
- (2) Put the thermostat into water, and gradually heat it.
- (3) Check the temperature at which the valve starts to open.
- (4) Check the temperature at which the valve is completely open.
- (5) Check the amount thermostat valve opens.
- (6) Replace the thermostat if it does not meet specifications.

See "COOLING SYSTEM SPECIFICATIONS"

