DAIHATSU

TYPE CB ENGINE

[CB-23, CB-61 & CB-80]

SECTION 8
COOLING SYSTEM

8

WM-08001

RADIATOR

IN-VEHICLE INSPECTION

Check the cooling system, following the procedure given below. Retighten or replace any part which exhibits defects.

(1) Detach the radiator cap and fill the cooling system with cooling water. Install a cap tester.

(2) Apply a pressure of 1.2 kg/cm^2 (17 psi) to the cooling system by means of the cap tester. Proceed to check the following items listed below.
   ① Radiator leakage
   ② Water pump leakage
   ③ Leakage at hose connections
   ④ Excessive hose bulge

   NOTE:
   Care must be exercised to ensure that the neck filler section of the radiator is not distorted while the cap tester is removed or installed, or during the test.

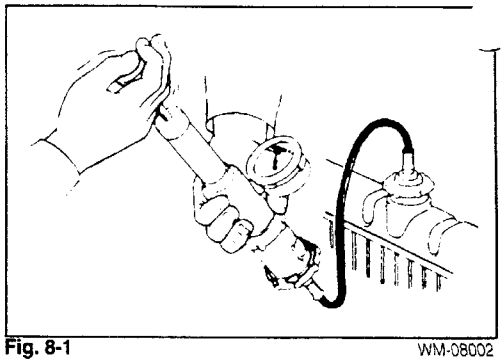

Fig. 8-1 WM-08002

(3) Checking of neck filler section (water filling port)
   ① Distorted or dented seal surface
   ② Distorted edge section

   NOTE:
   If the neck filler section is distorted, the radiator cap can not be seated on the neck filler section closely, resulting in a decrease in the water level.

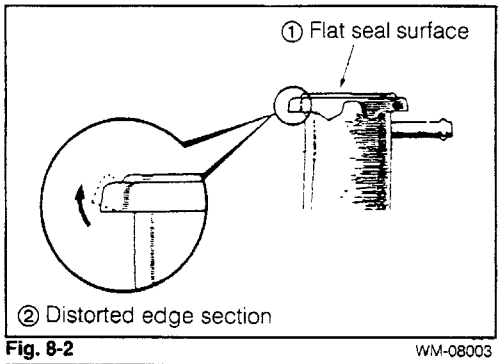

Fig. 8-2 WM-08003

RADIATOR CAP

INSPECTION

(1) Check the following parts. Replace any part which exhibits defects.
   ① Cranked or distorted seal packing
   ② Distorted or dented valve or valve seat
   ③ Water scale accumulation between valve and valve seat

   NOTE:
   Remove any water scale accumulation which is found between the valve and the valve seat.

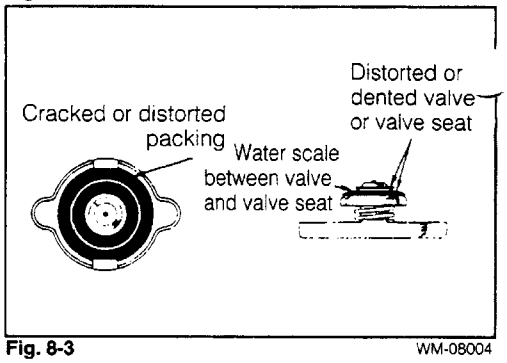

Fig. 8-3 WM-08004

(2) Check the pressure sealing and vacuum relief valve operation:

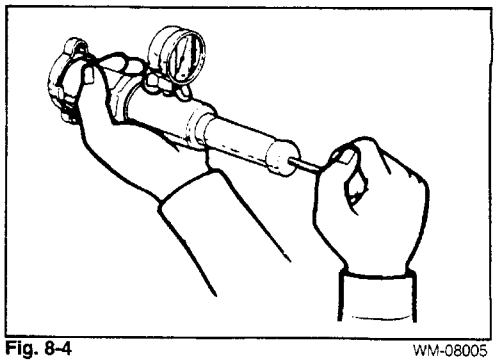
Fig. 8-4 WM-08005

Valve Opening Pressure Limit: kg/cm^2 (psi)

CB-23	0.6 (8.5)
CB-61	0.6 (8.5)
CB-80	0.6 (8.5)

Standard Valve: kg/cm^2 (psi)

CB-23	0.75 - 1.05
CB-61	0.75 - 1.05
CB-80	0.75 - 1.05

THERMOSTAT

INSPECTION

(1) Immerse the thermostat in water, and check the valve opening temperature by heating the water gradually.

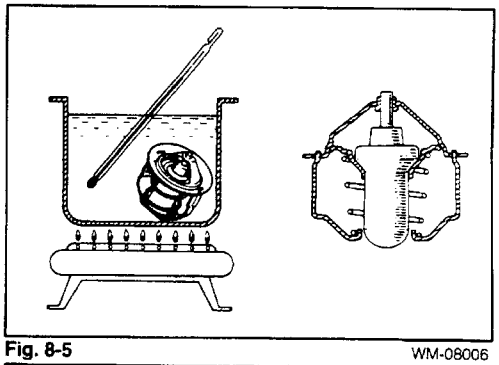
Fig. 8-5 WM-08006

(2) Replace the thermostat if the valve remains open at normal temperature or is not very tight when fully closed.

Specifications	Valve opening temperature (°C)	Valve total lift (mm)
Except ECE & EEC Specifications	80.5 - 83.5	8 mm or more at 95 °C
ECE & EEC Specifications	86.5 - 89.5	8 mm or more at 100 °C

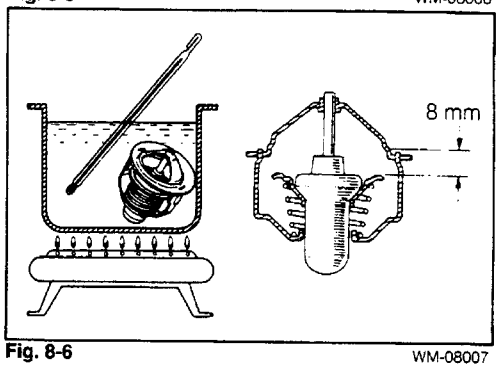

Fig. 8-6 WM-08007

CAUTION:
As for Type CB-80 engine, install the thermostat in such a way that the jiggle pin may comes at the upper side of the cylinder head. Failure to observe this caution may cause overheat or seizure of the engine.

RADIATOR THERMO CONTROL SWITCH

IN-VEHICLE INSPECTION

(1) Turn ON the ignition switch.
(2) Disconnect the radiator thermo control switch terminal and ground it directly to the body.
Confirm that the fan motor can turn.

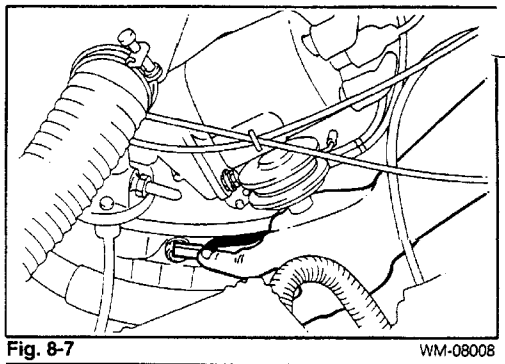

Fig. 8-7 WM-08008

UNIT INSPECTION

(1) Connect a circuit tester to the radiator thermo control switch.
Under this setting, change the water temperature. Observe the behavior of the circuit tester's pointer. If the pointer of the tester behaves as follows, it represents that the radiator thermo control switch is functioning normally.

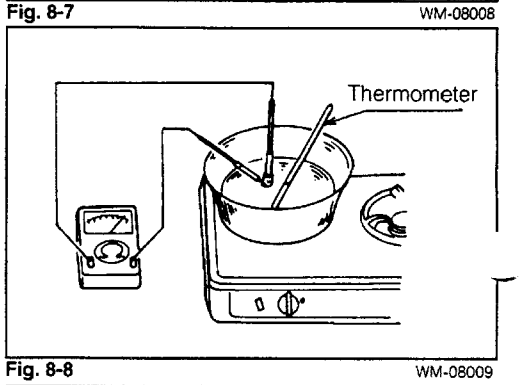

Fig. 8-8 WM-08009

(2) Radiator thermo control switch characteristics
① General and Australian specifications
When the cooling temperature reaches 92 $^{+1}_{-2}$°C, the radiator thermo control switch starts to operate. When the cooling water temperatures begins to drop, the radiator thermo control switch continues to function until the cooling water temperature drops to 87 ± 2°C.

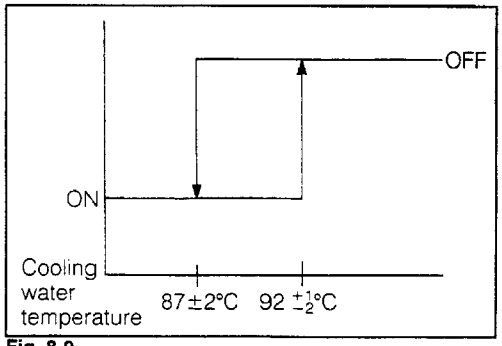

Fig. 8-9 WM-08010

② ECE & EEC Specifications
When the cooling temperature reaches 98 ± 2°C, the radiator thermo control switch starts to operate. When the cooling water temperatures begins to drop, the radiator thermo control switch continues to function until the cooling water temperature drops to 93 ± 2°C.

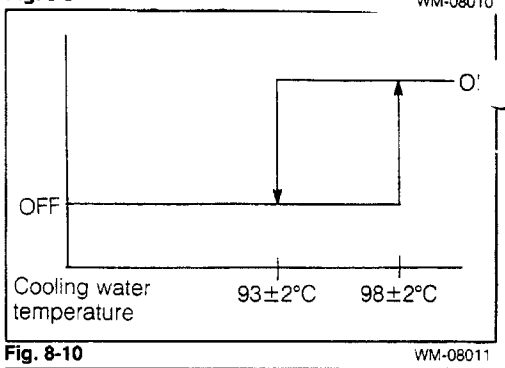

Fig. 8-10 WM-08011

Fan Motor

Connection of fan motor to battery
[Connect the positive ⊕ terminal of the motor to the positive ⊕ terminal of the battery.]
[Connect the negative ⊖ terminal of the motor to the negative ⊖ terminal of the battery.]

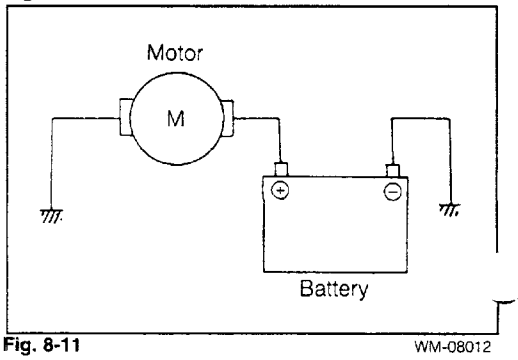

Fig. 8-11 WM-08012

WATER PUMP

COMPONENTS OF WATER PUMP

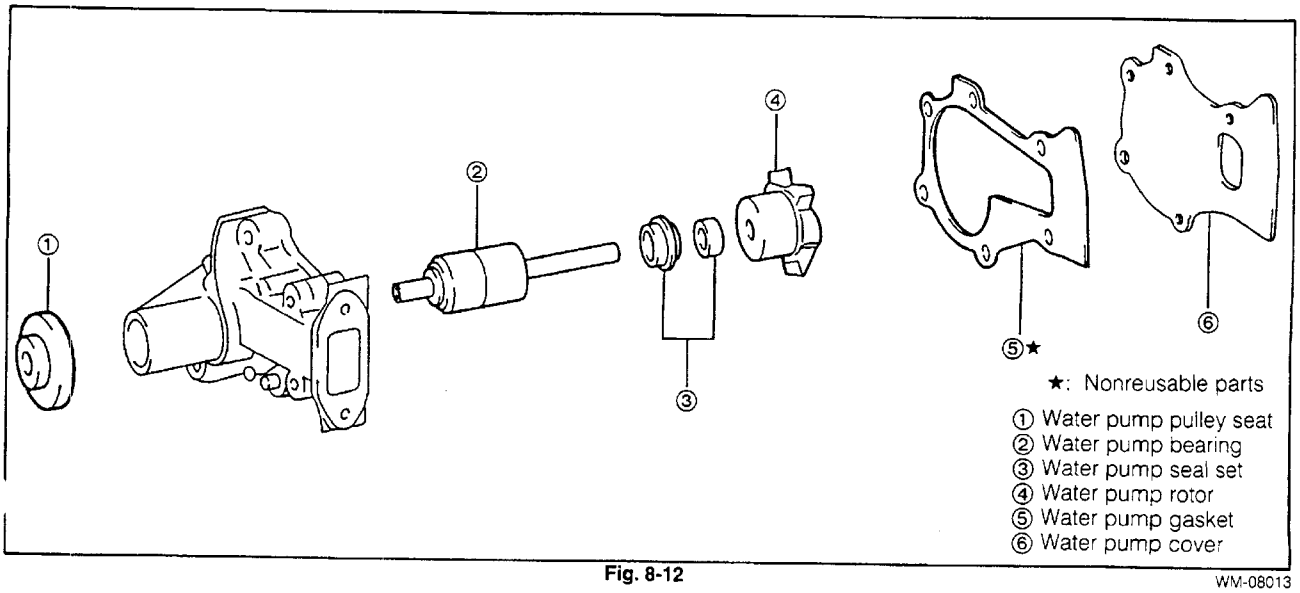

Fig. 8-12 WM-08013

DISASSEMBLY

1. Press off the water pump pulley, using the following SSTs.
   SST: 09253-87202-000
   SST: 09238-87201-000

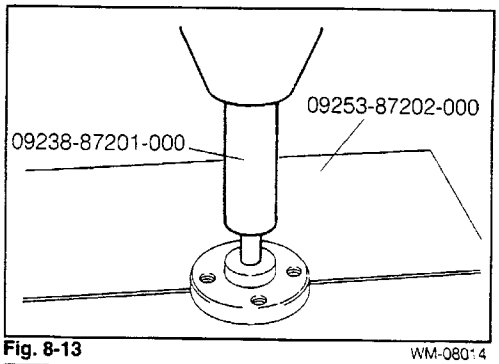

Fig. 8-13 WM-08014

2. Remove the water pump bearing, using the following SST.
   SST: 09237-87201-000

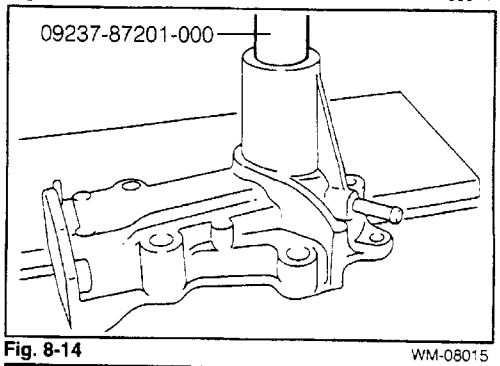

Fig. 8-14 WM-08015

3. Remove the rotor and seal set from the water pump bearing, using the following SST.
   SST: 09238-87201-000

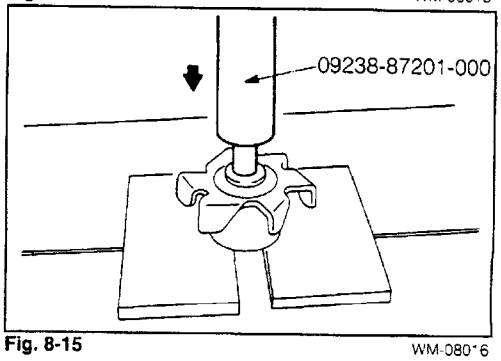

Fig. 8-15 WM-08016

INSPECTION

1. Check the water pump rotor and water pump seal set for evidence of damage or wear.
   Replace any parts that show defects.

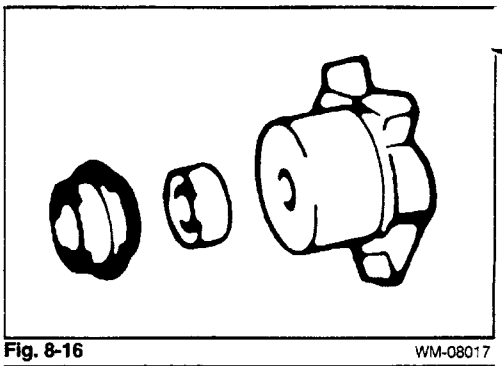

Fig. 8-16 WM-08017

2. Inspection the water pump bearing for damage, abnormal sound, or improper rotation.
   Replace the bearing that exhibits defects
3. Check the water inlet pipe "O" ring for deterioration or damage. Replace the "O" ring that indicates defects.

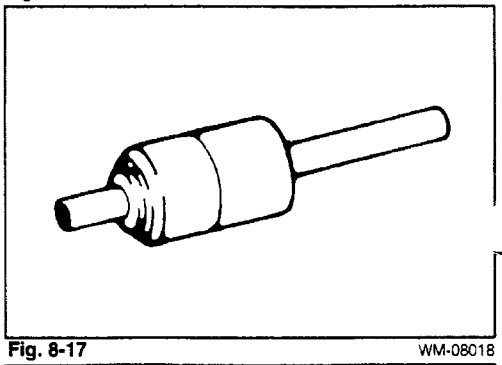

Fig. 8-17 WM-08018

ASSEMBLY

1. Press the bearing into water pump rotor, using the following SST.
   SST: 09237-87201-000

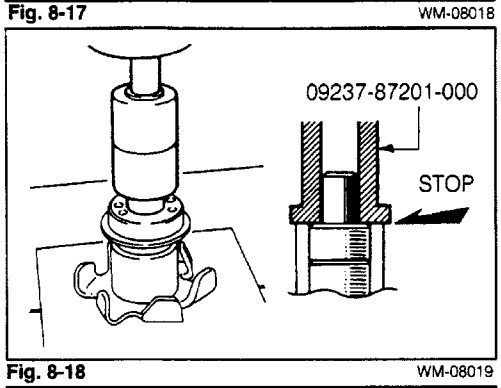

Fig. 8-18 WM-08019

2. Press the water pump set with the rotor into position, using the following SSTs.
   SST: 09238-87201-000
   SST: 09238-87701-000

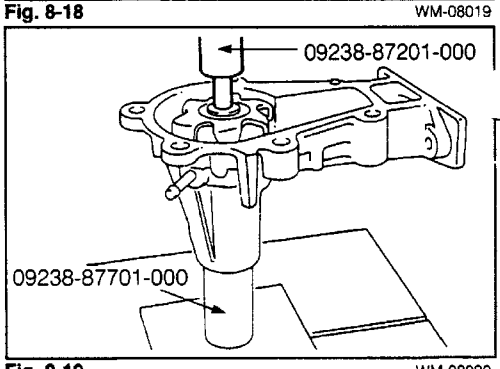

Fig. 8-19 WM-08020

3. Press the water pump rotor into position, using the following SST.
   SST: 09238-87201-000

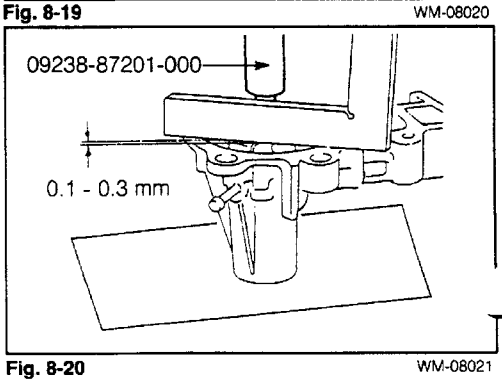

Fig. 8-20 WM-08021

4. Press the water pump bearing set into the water pump pulley seat, using the following SSTs.
   SST: 09238-87201-000
   SST: 09254-87201-000

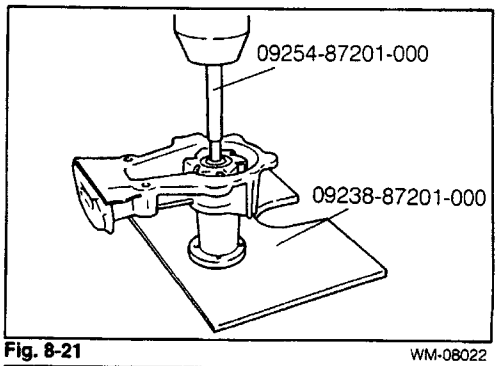

Fig. 8-21 WM-08022

5. After assembling, make sure the rotor rotates smoothly with the water pump seat in the installed condition.

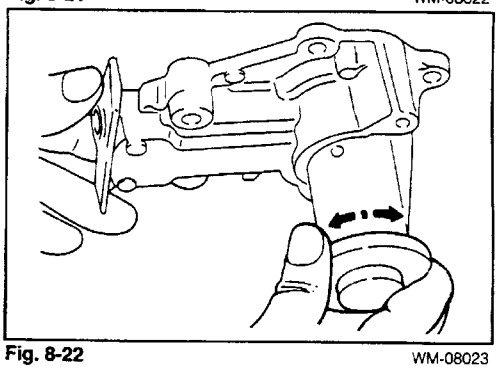

Fig. 8-22 WM-08023