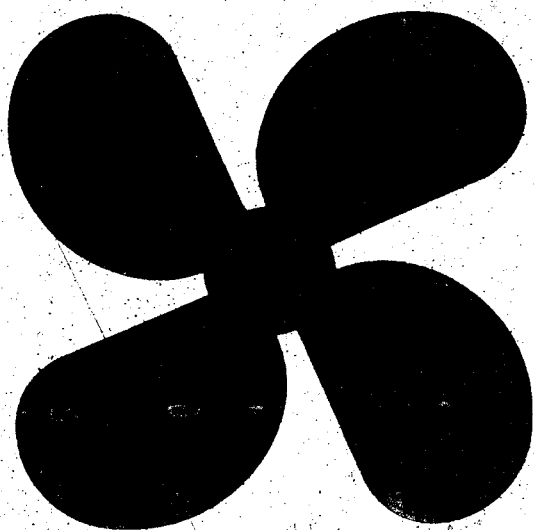


5

COOL



CHAPTER 5. COOLING SYSTEM

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RA

RADIATOR

- ① Recovery
- ② Hose
- ③ Recovery
- ④ Radiator
- ⑤ Recovery
- ⑥ Radiator
- ⑦ Conductor
- ⑧ Radiator
- ⑨ Drilling

10 Nm
(1.0 m.kg)

5 Nm
(0.5 m.kg)

10 N



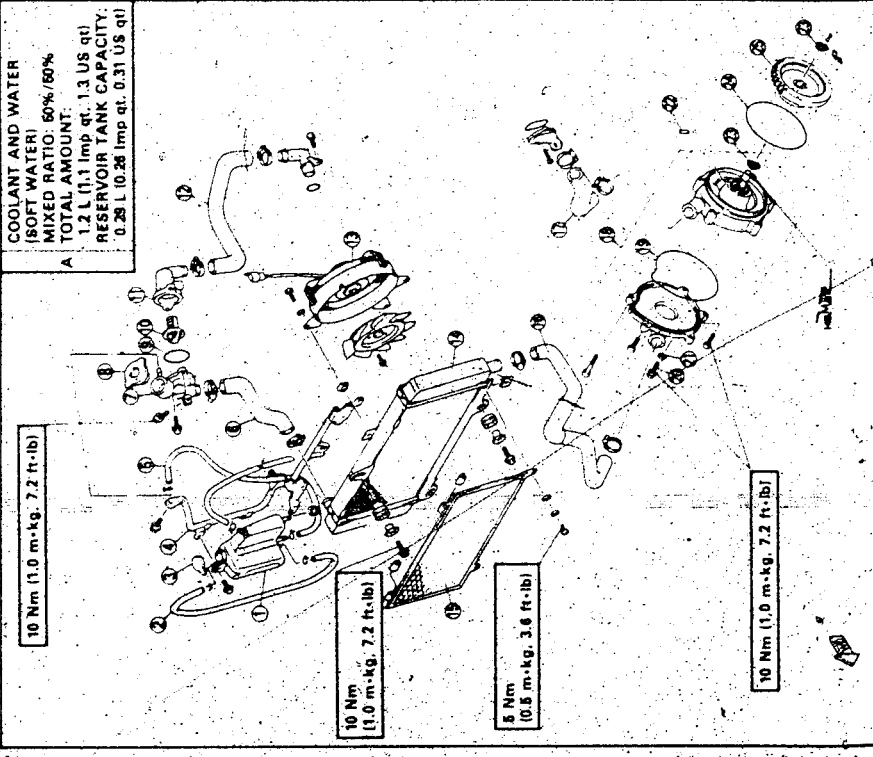
H-13



RADIATOR, WATER PUMP AND THERMOSTAT

COOLING SYSTEM RADIATOR, WATER PUMP AND THERMOSTAT

- 1 Recovery tank
- 2 Hose
- 3 Recovery tank cap
- 4 Radiator stay
- 5 Recovery tank hose
- 6 Radiator hose (from conduction)
- 7 Conduction
- 8 Radiator cap
- 9 O-ring
- 10 Thermostat
- 11 Thermostat housing
- 12 Radiator hose (from cylinder head)
- 13 Fan motor
- 14 Radiator
- 15 Radiator protector
- 16 Radiator hose (to water pump)
- 17 Radiator hose (to cylinder)
- 18 Water pump assembly
- 19 O-ring
- 20 Drain bolt
- 21 Gasket
- 22 Pin
- 23 Circlip
- 24 O-ring
- 25 Water pump gear



RADIATOR

WARNING

Do not remove the radiator cap when the engine and radiator are hot. Scalding hot fluid and steam may be blown out under pressure, which could cause serious injury. When the engine has cooled, open the radiator cap by the following procedure:
Place a thick rag, like a towel, over the radiator cap, slowly rotate the cap counterclockwise to the detent. This procedure allows any residual pressure to escape. When the hissing sound has stopped, press down on the cap while turning counterclockwise and remove it.

REMOVAL

1. Remove:
 - Seat
 - Side covers
 - Air scoops
 - Fuel tank
 - Engine guardRefer to the "COOLANT REPLACEMENT" section in the CHAPTER 3.
2. Drain:
 - CoolantRefer to the "COOLANT REPLACEMENT" section in the CHAPTER 3.
3. Disconnect:
 - Fan motor coupler

3. Disconnect:
 - Fan motor coupler



COOL

cap when the engine is running. This procedure is to escape. If the cap is not replaced, the engine will overheat and the radiator cap will be damaged.

REPLACEMENT

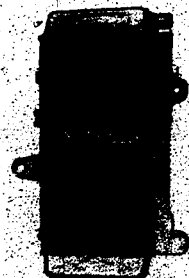
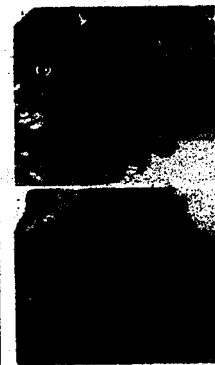
REPLACEMENT



COOL

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RADIATOR



4. Disconnect:

- Radiator hose (1) (from conduction)
- Radiator hose (2) (to water pump)

5. Remove:

- Radiator assembly (3)

6. Remove:

- Fan motor assembly (1)
- Radiator protector (2)

INSPECTION

1. Inspect:

- Radiator
- Obstruction - Blow out with compressed air through rear of radiator.
- Flattened fins - Repair.
- Coolant hoses
- Cracks/Damage - Replace

2. Inspect:

- Radiator cap
- Vacuum valve

Inspection steps:

- Measure radiator cap pressure using the radiator cap tester.
- Check vacuum valve for spring tension and seating condition.

Radiator cap tester:
P/N: YU-24480-1, 90880-01225
Adapter:
P/N: YU-33984, 90880-01362



RADIATOR

COOL

- Valve opens at pressure below specified value or defective - Replace

Valve opening pressure:
95 - 125 kPa
(0.95 - 1.25 kg/cm², 13.61 - 17.77 psi)

ASSEMBLY

1. Install:

- Protector
- Fan motor assembly
- Radiator assembly

Bolt (protector):
5 Nm (0.5 m·kg, 3.6 ft·lb)

Bolt (radiator):
10 Nm (1.0 m·kg, 7.2 ft·lb)

2. Connect:

- Radiator hose (to water pump)
- Radiator hose (from conduction)
- Fan motor coupler

3. Tighten:

- Drain bolts

Drain bolt:
10 Nm (1.0 m·kg, 7.2 ft·lb)

NOTE:

Replace with new copper gaskets

4. Install:

- Engine guard

Nut (engine guard):
7 Nm (0.7 m·kg, 5.1 ft·lb)

Bolt (engine guard):
7 Nm (0.7 m·kg, 5.1 ft·lb)



Below specified Value

13.51 - 17.77 psi

kg, 3.6 ft.-lb)
n.kg, 7.2 ft.-lb)

water pump)
conduction)

n.kg, 7.2 ft.-lb)

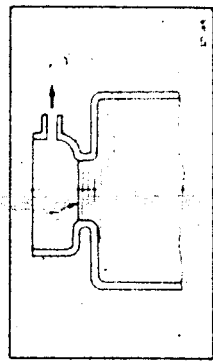
gaskets

yard):
kg, 5.1 ft.-lb)
yard):
kg, 5.1 ft.-lb)



RADIATOR

- 5. Fill
- Cooling system



- Coolant filling steps:
- Fill the coolant into the radiator until the radi
 - for a full
 - Start the engine (coolant level decreases)

CAUTION:

Always check coolant level, and check for coolant leakage before starting engine.

- Add the coolant while engine is running
- Stop the engine when coolant level stabilizes
- Add the coolant again to specified level 1
- Install the radiator cap

Recommended coolant

High quality ethylene glycol anti-freeze containing anti-corrosion for aluminum engine inhibitors



Coolant and water mixed ratio
50%:50%

Total amount:
1.2 L (1.1 Imp qt, 1.3 US qt)

Recovery tank capacity:
0.23 L (0.28 Imp qt, 0.31 US qt)

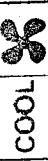
From "LOW" to "FULL" level:
0.17 L (0.18 Imp qt, 0.18 US qt)

- Hard water or salt water is harmful to the engine. You may use distilled water if you can not get soft water.
- Do not mix more than one type of ethylene glycol anti-freeze containing corrosion for aluminum engine inhibitors.

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WATER PUMP



- 6. Inspect
- Cooling system

Inspection steps:

- Connect radiator cap tester
- Apply 1.0 kg/cm² (14 lb./in.²) pressure
- Measure pressure with gauge
- Decrease of pressure (leaks) - Repair as required.

Radiator cap tester:

P/N, YU-24460-1, 90890-01326

Adapter:

P/N, YU-33884, 90890-01362

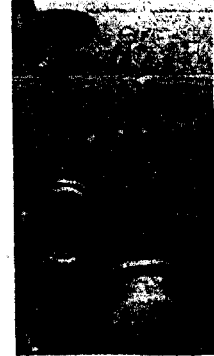
WATER PUMP DISASSEMBLY

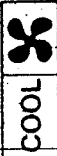
- Remove:
 - Seat
 - Side covers
 - Air scoops
 - Fuel tank
 - Engine guard
- Refer to the "COOLANT REPLACEMENT" section in the CHAPTER 3.

NOTE:

Be sure to drain the coolant before disassembly of the cooling system components.

- Disconnect:
 - Radiator hose 1 (from radiator)
 - Radiator hose 2 (to cylinder)





P

sp tester.
(14 lb./in.²) pressure
with gauge.
ure (leaks) -- Repair, at re-

sp tester:

24490-1, 90690-01325

33894, 90690-01323

COOLANT REPLACEMENT"
CHAPTER 3.

coolant before disassembly
in component

- 1) (from radiator)
- 2) (to cylinder)

WATER PUMP



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3. Remove
• Cover (water pump) 1

4. Remove
• O-ring 1



5. Remove
• Water pump housing 1



6. Remove
• Circlip 1
• Water pump gear 2
• Pin 3
• Circlip 4
• Water pump housing 5
• Impeller 6



7. Eliminate:
• Deposits
From the impeller 1 and water pump housing 2.

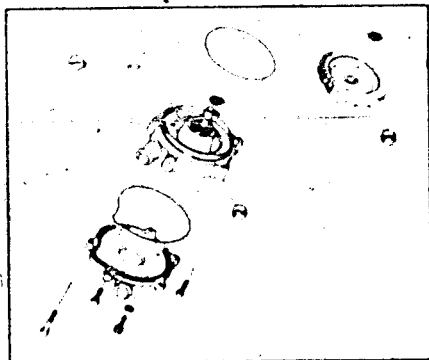


THERMOSTAT



INSPECTION

1. Inspect
• O-ring 1
• Water pump housing 2
• Water pump gear 3
• Cracks/Wear/Damage • Replace.



ASSEMBLY

Reverse the "DISASSEMBLY" procedure.

1. Apply
• Molybdenum disulfide grease
(onto impeller shaft end)
2. Fill
• Cooling system
Refer to the "COOLANT REPLACEMENT"
section in the CHAPTER 3.



THERMOSTAT

REMOVAL

1. Remove
• Seal
• Side covers
• Air scoops
• Fuel tank
• Engine guard
Refer to the "COOLANT REPLACEMENT"
section in the CHAPTER 3.

NOTE:

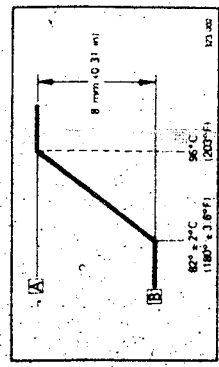
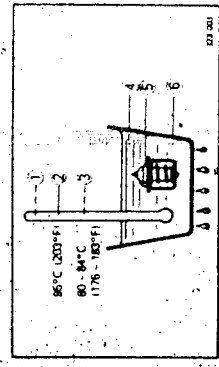
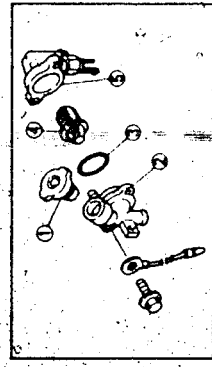
Be sure to drain the coolant before disassembly
of the cooling system components

THERMOSTAT COOL

I-1

COOL

THERMOSTAT



2. Inspect:
 - O-ring
 - Wear/Damage—Replace.

- ASSEMBLY:**
Reverse the "REMOVAL" procedure.
1. Install:
 - Thermostat
 - Conduction

Bolt (conduction):
10 Nm (10 m·kg, 7.2 ft·lb)

2. Fill:
 - Cooling system
- Refer to the "COOLANT REPLACEMENT" section in the CHAPTER 3.

2. Disconnect:
 - Recovery tank hose 1
 - Radiator hose 2 (from radiator)
 - Radiator hose 3 (to cylinder head)
 - Thermo switch lead 4
 - Thermo unit lead 5
 - Earth lead 6
3. Remove:
 - Bolt (conduction) 7
4. Remove:
 - Radiator cap 1
 - Conduction 2
 - O-ring 3
 - Thermostat 4
 - Thermostat housing 5

- INSPECTION**
1. Inspect:
 - Thermostat 5
- Valve does not open at 80 ~ 84°C (176 ~ 183°F) — Replace

- Inspection steps:**
- Suspend thermostat in a vessel.
 - Place reliable thermometer in a water.
 - Heat water slowly.
 - Observe thermometer, while stirring water continually.

1. Thermometer
2. Full open
3. Opening sequence begins.
4. Water
5. Thermostat
6. Vessel
7. OPEN
8. CLOSE

NOTE:
Thermostat is sealed and its setting is specialized work. If its accuracy is in doubt, replace it. A faulty unit could cause serious overheating or overcooling.