
ENGINE COOLING

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GENERAL**OUTLINE OF CHANGES**

The following service procedures have been established in line with the addition of vehicles with 4G63-MPI engine. Furthermore, other items are the same as for the 4G64-GDI engine.

GENERAL INFORMATION

Items			Specifications
Radiator	Performance kJ/h	4G6-MPI	196,744
		4G6-GDI	186,279
A/T oil cooler	Performance kJ/h		5,860

SERVICE SPECIFICATION

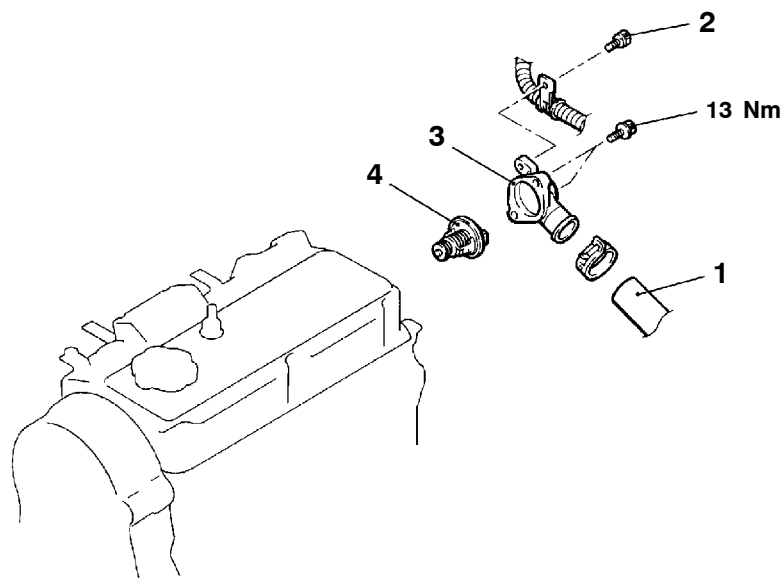
Items		Standard value
Thermostat <4G6-MPI>	Valve opening temperature of thermostat °C	82 ± 1.5
	Full-opening temperature of thermostat °C	95
	Valve lift (at 95°C) mm	8.5 or more

SEALANT

Items	Specified sealant	Remarks
Thermostat case assembly, Water outlet fitting	Mitsubishi Genuine Parts No. MD970389 or equivalent	Semi-drying sealant

THERMOSTAT <4G6-MPI>**REMOVAL AND INSTALLATION****Pre-removal and Post-installation Operation**

- Engine Coolant Draining and Supplying
- Air Intake Duct Removal and Installation



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Removal steps

1. Radiator lower hose connection
2. Control wiring harness mounting bolt



3. Water inlet fitting
4. Thermostat

REMOVAL SERVICE POINT**◀A▶ RADIATOR LOWER HOSE DISCONNECTION**

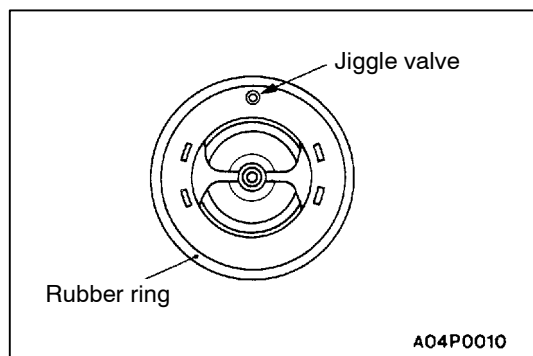
After making mating marks on the radiator hose and the hose clamp, disconnect the radiator hose.

INSTALLATION SERVICE POINTS**▶A◀ THERMOSTAT INSTALLATION**

Install the thermostat so that the jiggle valve is facing straight up.

Caution

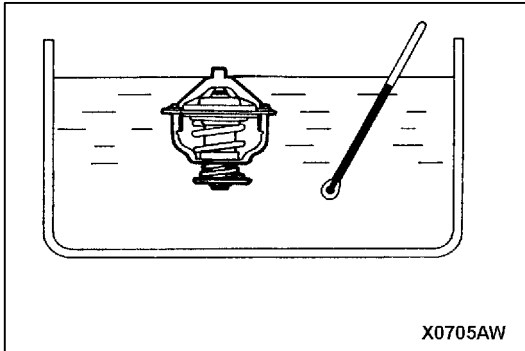
Make absolutely sure that no oil is adhering to the rubber ring of the thermostat. In addition, be careful not to fold over or scratch the rubber ring when inserting. If the rubber ring is damaged, replace the thermostat.



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►B◄ RADIATOR LOWER HOSE CONNECTION

1. Insert each hose as far as the projection of the water inlet fitting.
2. Align the mating marks on the radiator hose and hose clamp, and then connect the radiator hose.



INSPECTION

THERMOSTAT CHECK

1. Immerse the thermostat in water, and heat the water while stirring. Check the thermostat valve opening temperature.

Standard value:

Valve opening temperature: $82.5 \pm 1.5^{\circ}\text{C}$

2. Check that the amount of valve lift is at the standard value when the water is at the full-opening temperature.

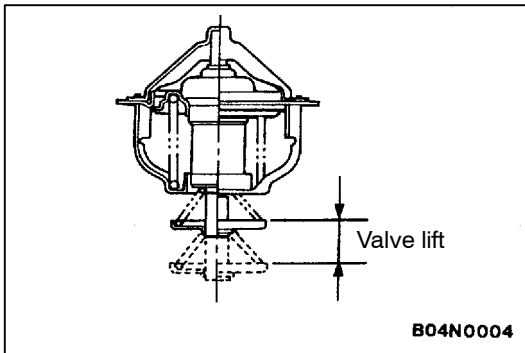
Standard value:

Full-opening temperature: 95°C

Amount of valve lift: 8.5 mm or more

NOTE

Measure the valve height when the thermostat is fully closed, and use this measurement to calculate the valve height when the thermostat is fully open.

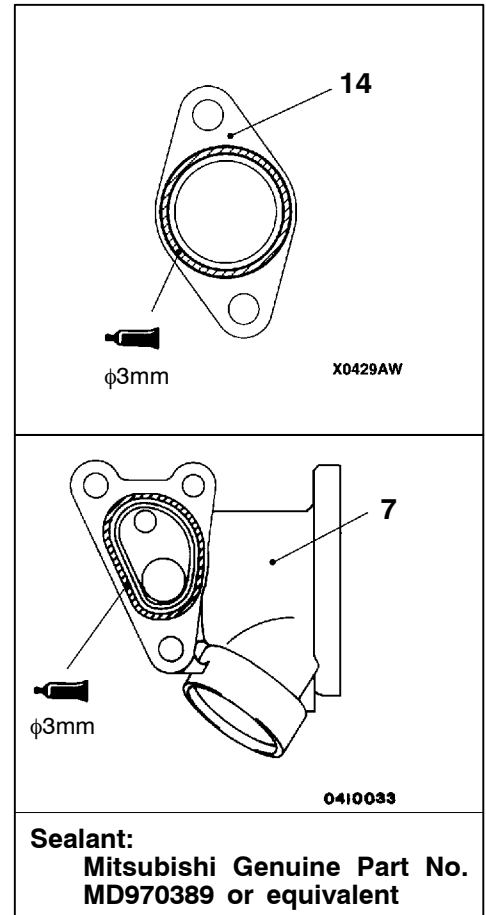
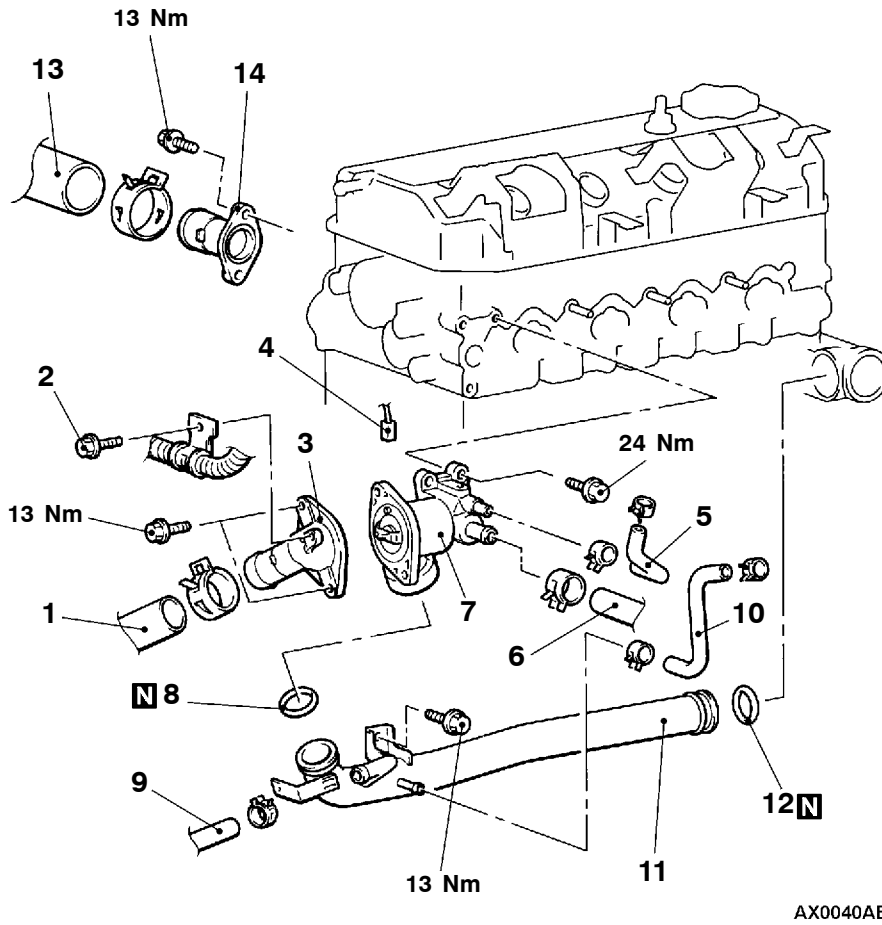


WATER HOSE AND WATER PIPE <4G6-MPI>

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation

- Engine Coolant Draining and Suppling
- Air Cleaner and Air Intake Hose Assembly Removal and Installation



Removal steps

- ◀A▶ ▶B▶
1. Radiator lower hose connection
 2. Control wiring harness mounting bolt
 3. Water inlet fitting
 4. Engine coolant temperature gauge unit connector
 5. Water hose
 6. Heater hose connection

- ▶A▶ ▶C▶
7. Thermostat case assembly
 8. O-ring
 9. Heater hose connection
 10. Water hose
 11. Water inlet pipe assembly
 12. O-ring
- ▶C▶ ▶B▶ ▶A▶
13. Radiator upper hose connection
 14. Water outlet fitting

REMOVAL SERVICE POINT**◀A▶ RADIATOR UPPER HOSE/RADIATOR LOWER HOSE DISCONNECTION**

After making mating marks on the radiator hose and the hose clamp, disconnect the radiator hose.

INSTALLATION SERVICE POINTS**▶A◀ WATER OUTLET FITTING/THERMOSTAT CASE ASSEMBLY INSTALLATION**

Squeeze out the sealant from the tube evenly and apply it so that there is not too much sealant and no places without sealant.

Specified Sealant:

Mitsubishi Genuine Part No. MD970389 or equivalent

▶B◀ RADIATOR LOWER HOSE/RADIATOR UPPER HOSE CONNECTION

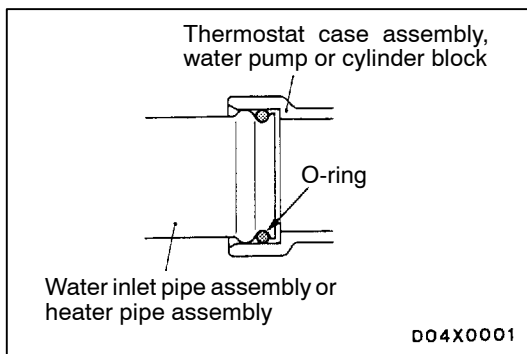
1. Insert each hose as far as the projection of the water inlet fitting or water outlet fitting.
2. Align the mating marks on the radiator hose and hose clamp, and then connect the radiator hose.

▶C◀ O-RING INSTALLATION

Insert the O-ring to the water inlet pipe assembly or the heater pipe assembly and coat the outer circumference of the O-ring with water or engine coolant.

Caution

Do not allow engine oil or other greases to adhere to the O-ring

**INSPECTION****WATER PIPE AND HOSE CHECK**

Check the water pipe and hose for cracks, damage, clog and replace them if necessary.