
SECTION 14

ENGINE COOLING

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General

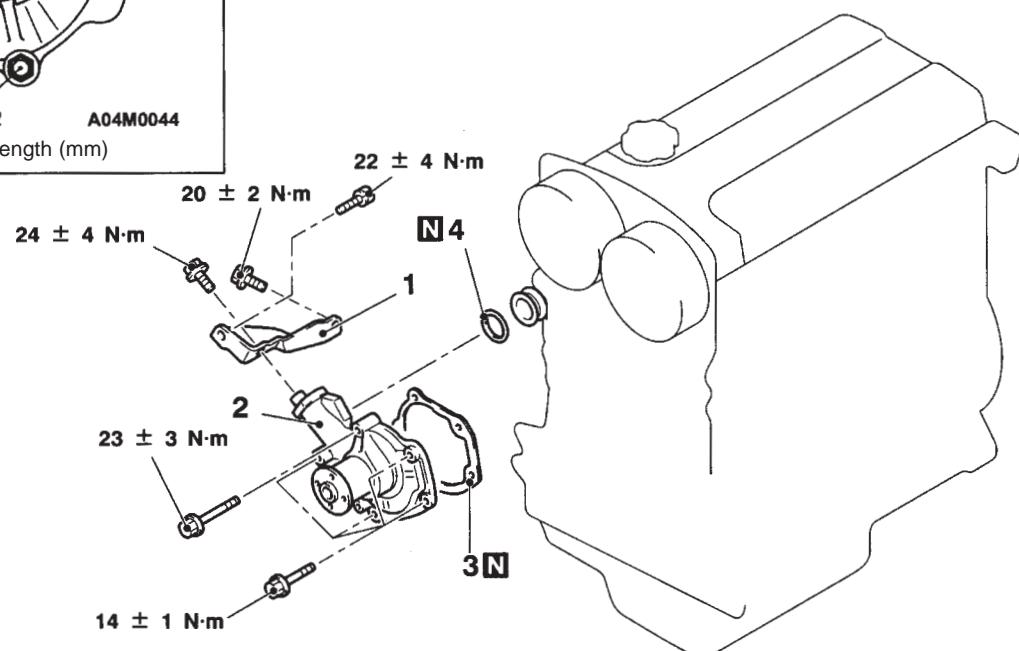
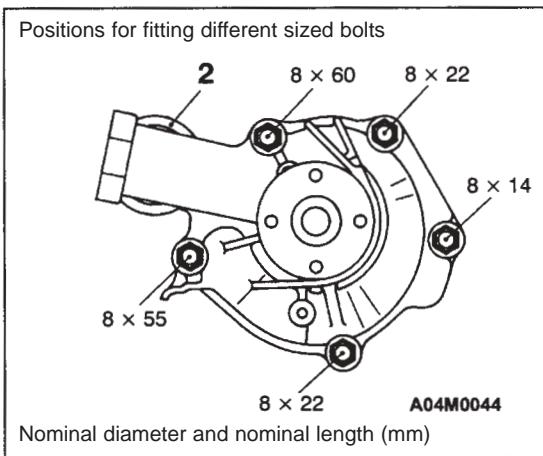
The following servicing guidelines for the water pump and the water hose and pipe have been prepared for vehicles which use the 4G63-MIVEC-T/C engine. Other servicing guidelines remain unchanged.

Water pump

Removal and fitting

Jobs to be completed before removal and after fitting

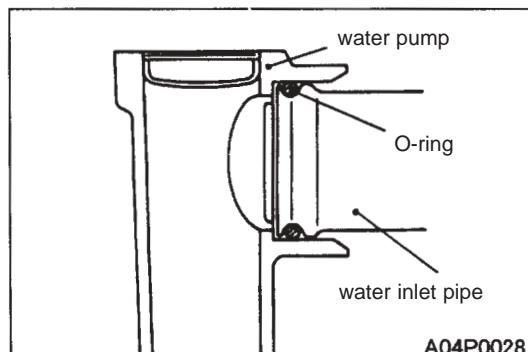
- Draining and refilling of the coolant
- Removal and refitting of the timing belt (Ref Section 11)



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Removal procedure

1. Alternator bracket
2. Water pump
3. Water pump gasket
4. O-ring



Fitting guidelines

► A 4 Fitting the O-ring

Fit the O-ring into the O-ring groove at the end of the water inlet pipe, and insert it into the water pump after moistening with water the places where the O-ring will make contact with the water pump.

Caution

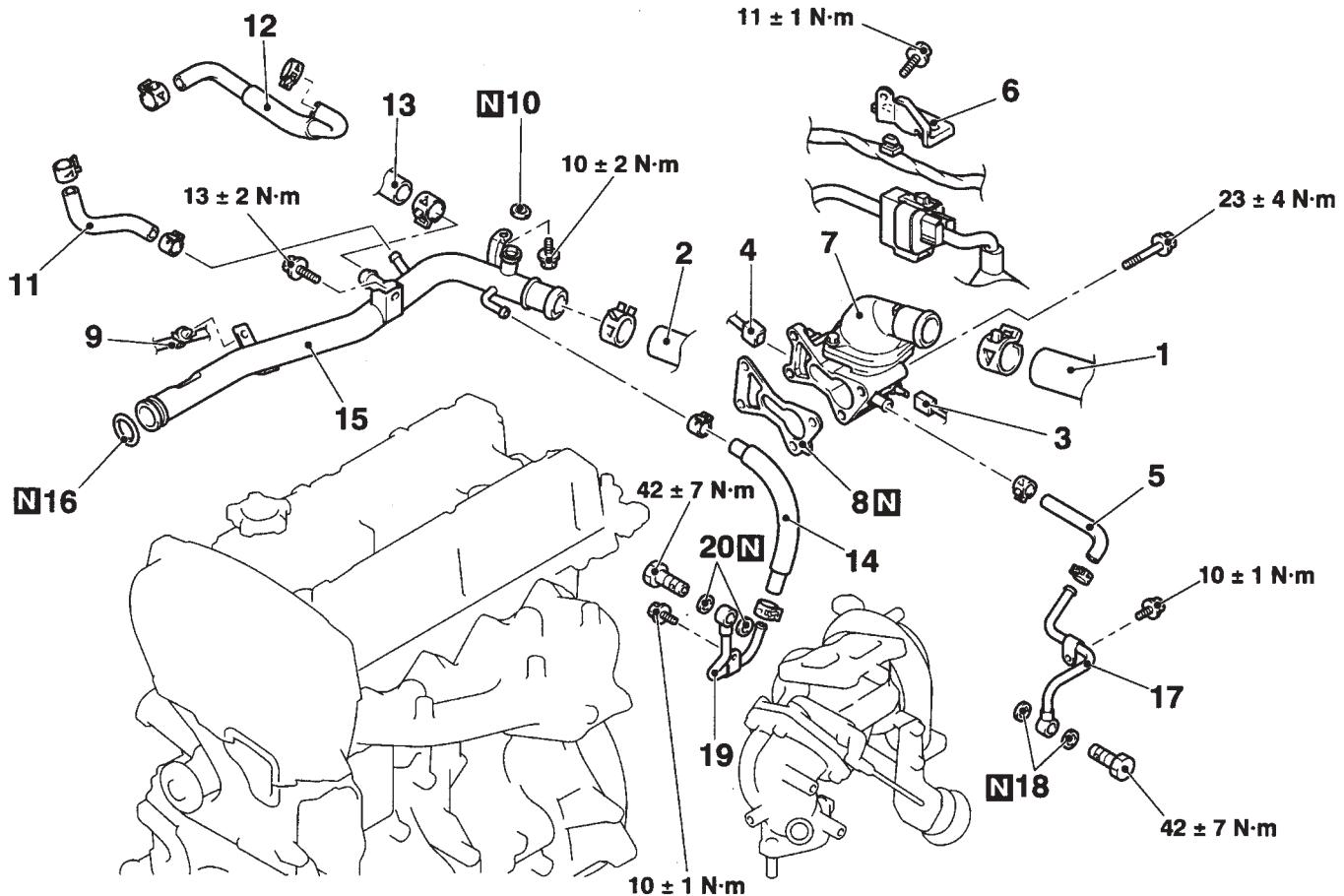
Ensure that absolutely no engine oil, or other type of grease, gets onto the O-ring.

Water hose and pipe

Removal and fitting

Jobs to be completed before removal and after fitting

- Removal and refitting of the valence
- Draining and refilling of the water coolant
- Removal and refitting of the air cleaner ASSY
- Removal and refitting of the air by-pass valve ASSY, the air by-pass hose, air hoses D and E, and air pipe C
- Removal and refitting of the secondary air control valve (Ref Section 15: Secondary air control system)

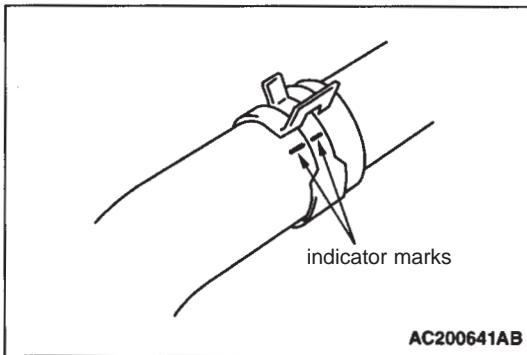


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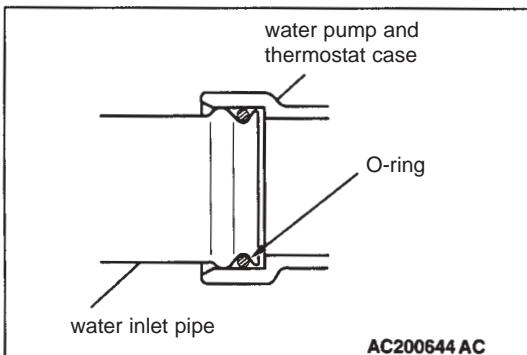
Removal procedure

◀ A ▶ ▶ B ▶ 1. Connection to the radiator upper hose
 ▵ A ▶ ▶ B ▶ 2. Connection to the radiator lower hose
 3. Water temperature gauge unit connector
 4. Water temperature sensor connector
 5. Water hose
 6. Bracket
 7. Water outlet fitting and thermostat case ASSY
 8. Thermostat case gasket
 9. Connection to the knock sensor harness clamp
 ▶ A ▶ 10. O-ring
 11. Water hose

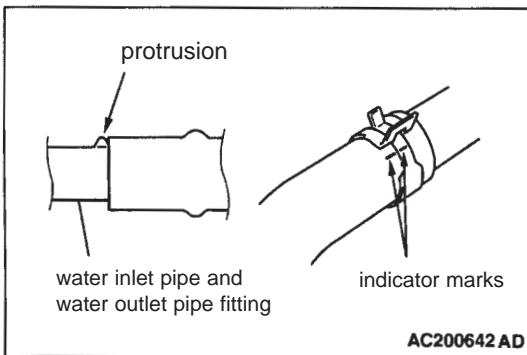
12. Water hose
 13. Connection to the heater hose
 14. Water hose
 ▶ A ▶ 15. Water inlet pipe
 ▶ A ▶ 16. O-ring
 17. Turbocharger water feed pipe
 18. Gasket
 • Turbocharger ASSY
 19. Turbocharger water return pipe
 20. Gasket



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Removal guidelines

◀ A ▶ Removing the radiator upper hose and the radiator lower hose

Mark the radiator hose and the hose clamp with indicator marks and then remove the radiator hose.

Fitting guidelines

► A ◀ Fitting the O-ring and the water inlet pipe

Fit the O-ring into the groove at the end of the water inlet pipe, and insert it after moistening with water the places where the O-ring and the water inlet pipe will be in contact.

Caution

Ensure that absolutely no engine oil, or other type of grease, gets onto the O-ring.

► B ◀ Connecting the radiator lower hose and the radiator upper hose

1. Insert the hose as far as the protrusion on the water inlet pipe and the water outlet fitting.
2. Match up the indicator marks on the radiator hose and the hose clamp, and fit the radiator hose.