COOLING

CONTENTS

N07AA-

SPECIFICATIONS

GENERAL SPECIFICATIONS

N07CA-

Items	Specifications
Cooling method	Water-cooled, pressurized, forced circulation
Radiator	
Type	Pressurized corrugated fin type
Performance kJ/h (kcal/h, B.T.U./h)	
<2.6 L Engine>	182,512 (43,600, 173,016)
<3.0 L Engine>	
Vehicles with a manual transmission	193,396 (46,200, 183,333)
Vehicles with an automatic transmission	199,591 (47,680, 189,206)
Fan clutch	
Type	Thermostatic control type with spiral type bimetal
Water pump	
Type	Impeller of centrifugal type
Thermostat	
Type	Wax pellet type with jiggle valve
Identification mark	88 (Stamped on flange)
Drive belt	
Type	V-belt
Thermo switch (for air conditioner)	
Type	Heat-sensitive thermistor type
Engine coolant temperature switch (for automatic transmission)	
Type	Thermo-ferrite type
Engine coolant temperature sensor	
Type	Thermistor type
Engine coolant temperature gauge unit	
Type	Thermistor type

SERVICE SPECIFICATIONS

N07CB-

Items	Specifications
Standard value	
Range of coolant antifreeze concentration %	30–60
Thermostat	
Valve opening temperature of thermostat °C (°F)	88 (190)
Full-opening temperature of thermostat °C (°F)	100 (212) or more
Opening pressure of radiator cap high pressure valve kPa (psi)	75–105 (11–15)
Drive belt deflection mm (in.)	
<2.6 L Engine>	9–12 (.35–.47)
<3.0 L Engine>	
When a new belt is put in	6.5–8.0 (.256–.315)
When a used belt is put in, or the one now in use is re-stretched	9.0 (.354)
Thermo switch (for automatic transmission control system)	
Continuity temperature °C (°F)	50 (122) or more
Engine coolant temperature gage unit	
Resistance	
At 70°C (158°F) Ω	104 ± 13.5
At 115°C (239°F) Ω	23.8 ± 2.5

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Items	Specifications
Engine coolant temperature sensor	
Resistance	
At 20°C (68°F) kΩ	2.45 ± 0.24
At 80°C (176°F) Ω	296 ± 32
Engine coolant temperature switch	
Activation temperature at when the switch is turned to ON °C (°F)	112–118 (234–244)
Limit	
Opening pressure of radiator cap high pressure valve kPa (psi)	65 (9.2)

TORQUE SPECIFICATIONS

N07CC–

Items	Nm	ft.lbs.
<2.6 L Engine>		
Alternator brace bolt	12–15	9–11
Alternator support nut	20–22	14–16
Radiator		
Radiator shroud to radiator	3–7	2–5
Radiator to headlight support	8–11	6–8
Cooling fan to fan clutch	10–12	7–9
Fan clutch to water pump pully	8–10	6–7
Water outlet fitting attaching bolt	17–20	13–14
Air cleaner attaching nut	16–19	12–14
Air pipe assembly to reed valve bracket	10–13	7–9
Air pipe assembly flare nut	70–100	51–72
Exhaust manifold cover	12–15	9–11
Exhaust manifold attaching nut	15–20	11–14
Exhaust manifold to exhaust pipe	20–30	14–22
Water pipe attaching bolt	10–12	7–9
Thermo switch	6–9	4–7
Engine coolant temperature switch	10–14	7–10
Engine coolant temperature sensor	20–40	14–29
Engine coolant temperature gauge unit	10–12	7–9
<3.0 L Engine>		
Radiator shroud to radiator	3–7	2–5
Radiator to headlight support	8–11	6–8
Radiator upper shroud to radiator lower shroud	8–11	6–8
Cooling fan to fan clutch	10–12	7–9
Fan clutch to water pump pully	10–12	7–9
Power steering oil pump to oil pump mounting bracket	35–45	25–33
Oil pump mounting bracket to oil pump bracket	35–45	25–33
Oil pump bracket to engine	35–45	25–33
Timing belt cover	10–12	7–9
Water pump	20–27	14–20
Heater pipe assembly to intake manifold	10–13	7–9
Timing belt tensioner bolt	22–30	16–21
Fuel high pressure hose to delivery pipe	7–11	5–8
Delivery pipe to air intake plenum	10–13	7–9
Air intake plenum to air intake manifold	15–20	11–14
Crankshaft pulley	150–160	108–116
Water pipe assembly to engine	12–15	9–11
Water outlet fitting attaching bolt	17–20	13–14
Thermo switch	6–9	4–7
Engine coolant temperature sensor	20–27	14–20
Engine coolant temperature gauge unit	10–12	7–9

LUBRICANTS

N07CD–

Items	Recommended antifreeze	Quantity
Engine coolant	DIA QUEEN LONG-LIFE COOLANT (Part No. 0103044) or HIGH QUALITY ETHYLENE GLYCOL ANTIFREEZE COOLANT	<2.6 L Engine> *8.0 lit. (8½ qts.) <3.0 L Engine> Vehicles without rear heater *9.1 lit. (9½ qts.) Vehicles with rear heater *9.95 lit. (10½ qts.)

NOTE : * Includes 0.65 lit. (.69 qts.) in reserve tank.

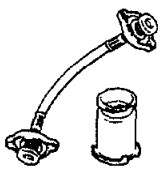
SEALANTS AND ADHESIVES

N07CE–

Items	Specified sealants	Quantity
Thermo switch (threaded part)	3M ART Part No. 8660 or equivalent	As required
Engine coolant temperature switch (threaded part)	3M ART Part No. 8660 or equivalent	As required
Engine coolant temperature sensor (threaded part)	3M ART Part No. 8660 or equivalent	As required
Engine coolant temperature gauge unit (threaded part)	3M ART Part No. 8660 or equivalent	As required

SPECIAL TOOL

N07DA–

Tool	Number	Name	Use
	MIT210863	Radiator cap test adapter	Radiator cap test

TROUBLESHOOTING

N07EBAB

Symptom	Probable cause	Remedy
Overheat	Insufficient coolant	Replenish
	Antifreeze concentration too great	Correct
	Loose or broken drive belt	Replace
	Inoperative fan clutch	Replace
	Damaged or blocked (insufficiently ventilated) radiator fins	Correct
	Water leaks	
	Damaged radiator core joint	Replace
	Corroded or cracked hoses (radiator hose, heater hose, etc.)	Replace
	Loose bolt or faulty gasket in water outlet fitting (thermostat)	Correct or replace
	Loose water pump mounting bolt or faulty gasket	Correct or replace
	Faulty radiator cap valve or setting of spring	Replace

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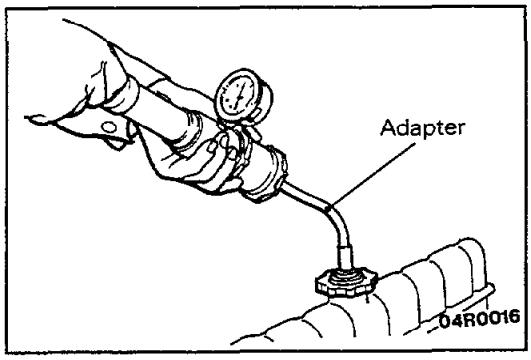
Symptom	Probable cause	Remedy
Overheat	Faulty thermostat operation	Replace
	Faulty water pump operation	Replace
	Water passage clogged with slime or rust deposit or foreign substance	Clean
No rise in temperature	Faulty thermostat	Replace

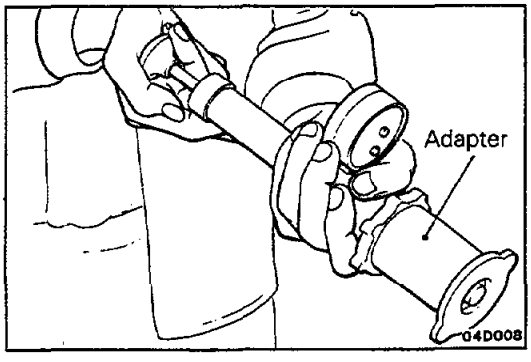


SERVICE ADJUSTMENT PROCEDURES

ENGINE COOLANT LEAK CHECK N07FAAC

1. Loosen radiator cap.
2. Confirm that the coolant level is up to the filler neck.
3. Install a radiator cap tester to the radiator filler neck and apply 160 kPa (23 psi) pressure. Hold for two minutes in that condition, while checking for leakage from the radiator, hose or connections.

   Caution
   Be sure to completely clean away any moisture from the places checked.
   When the tester is removed, be careful not to spill any coolant from it.
   Be careful, when installing and removing the tester and when testing, not to deform the filler neck of the radiator.
4. If there is leakage, repair or replace the appropriate part.



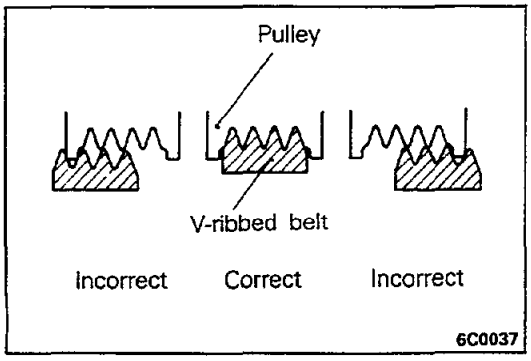
RADIATOR CAP PRESSURE TEST N07FBAB

1. Use an adapter to attach the cap to the tester.
2. Increase the pressure until the indicator of the gauge stops moving.

   Standard value : 75–105 kPa (11–15 psi)
   Limit : 65 kPa (9.2 psi)
3. Replace the radiator cap if the reading does not remain at or above the limit.

ENGINE COOLANT REPLACEMENT/CONCENTRATION TEST N07FCAAa

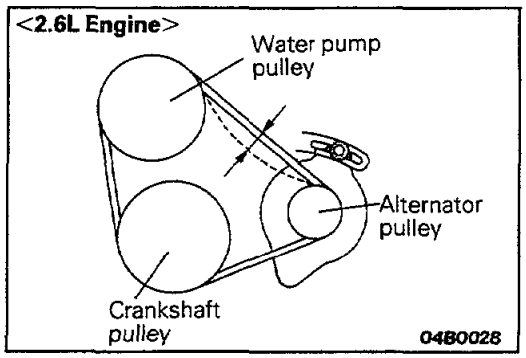
Refer to GROUP 0 – Maintenance Service.

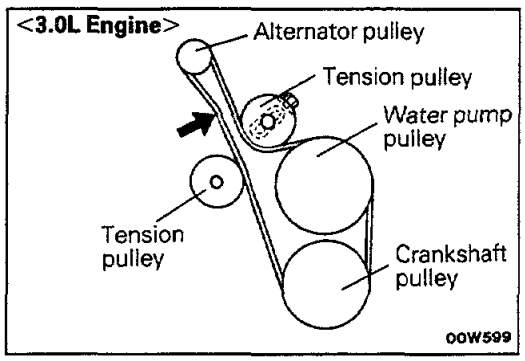


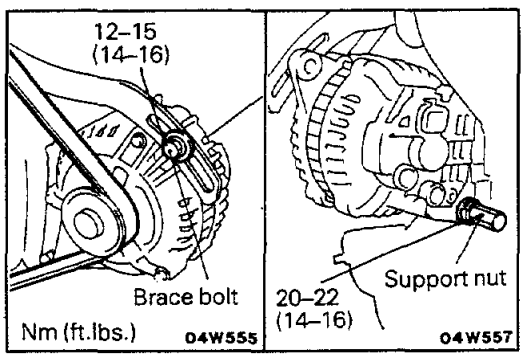
DRIVE BELT DEFLECTION CHECK N07FEAH

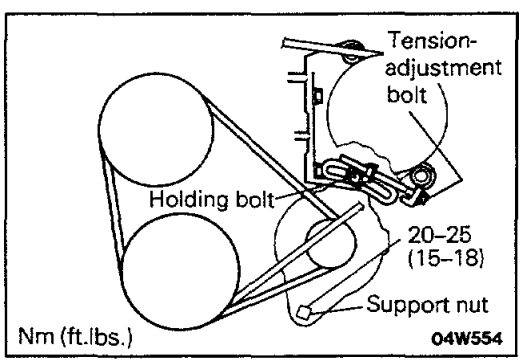
1. Check to be sure that the belt is correctly installed in the groove of the pulley.

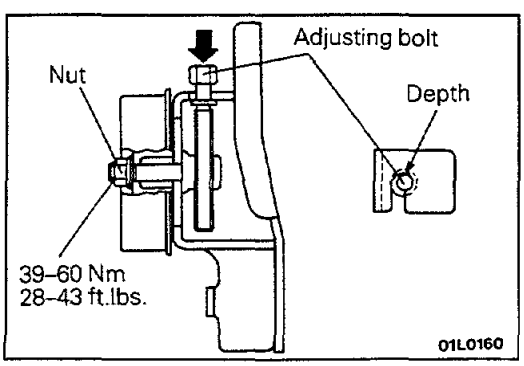
   Caution
   If there is belt squeal or slippage, check the amount of deflection, check for wear, damage or deterioration at the surface of contact with the pulley, and check for scars on the pulley.











2. Apply 100N (22 lbs.) force to the belt back midway between the pulleys as shown in the figure, measure the deflection or measure tension with a tension gauge according to its instruction.

Standard value :

Items		Check value	Adjustment value	
			New belt	Used belt
2.6L Engine	Deflection mm (in.)	9–12 (.35–.47 in.)	–	–
3.0L Engine	Deflection mm (in.)	5.0–6.0 (.197–.236)	6.5–8.0 (.256–.315)	9.0 (.354)
	Gauge N (lbs.)	350–600 (77–132)	500–700 (110–155)	400 (88)

Caution
- **Measure the amount of belt deflection between the designated pulleys.**
- **An overtensioned belt could cause not only premature belt wear but also noise and damage to water pump bearing and alternator bearing.**
  A loose belt also could cause failure of the alternator to generate enough power and consequently a run-down battery.

DRIVE BELT DEFLECTION ADJUSTMENT <2.6L ENGINE>

N07FFAD

Vehicles without an air conditioner
1. Loosen the alternator brace bolt and the alternator support nut.
2. Place a bar or similar object in contact with the stator part of the alternator, and manually provide the suitable tension to adjust the amount of belt deflection.
3. Tighten the alternator brace bolt and the alternator support nut to the specified torque.

Vehicles with an air conditioner
1. Loosen the alternator support nut and the bolt holding the alternator.
2. Adjust the amount of deflection of the belt by using the tension-adjustment bolt.
3. Tighten the alternator support nut and the bolt holding the alternator.

<3.0L ENGINE>

1. To increase belt tension, loosen the nut 1/8 turn, turn the left-hand threaded bolt clockwise viewed from the arrow direction, and displace the tension pulley slightly.

   Caution
   Put the adjusting bolt into the recess at the far depth of the elongated hole on the tension bracket.
2. Tighten the nut.
3. Turn the engine one time or more and check the belt tension. Readjust, if necessary.

   NOTE
   Even for a new belt, the adjustment value for a used belt should be used to make the adjustment if the belt has been used for as long as five minutes or more.

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RADIATOR

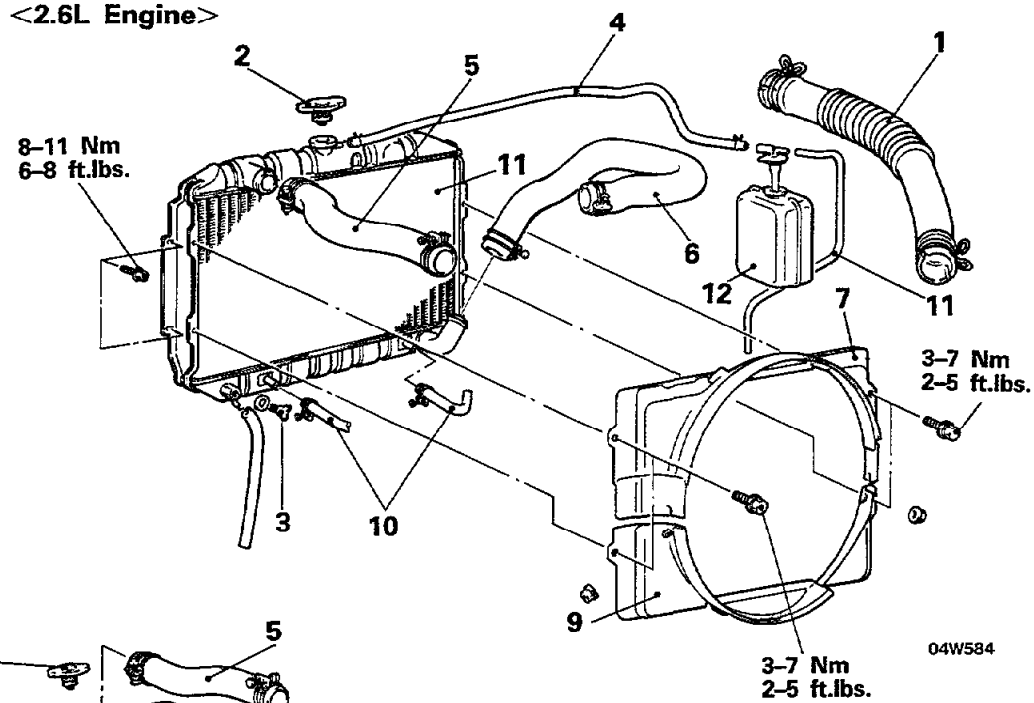
REMOVAL AND INSTALLATION

N07QA-

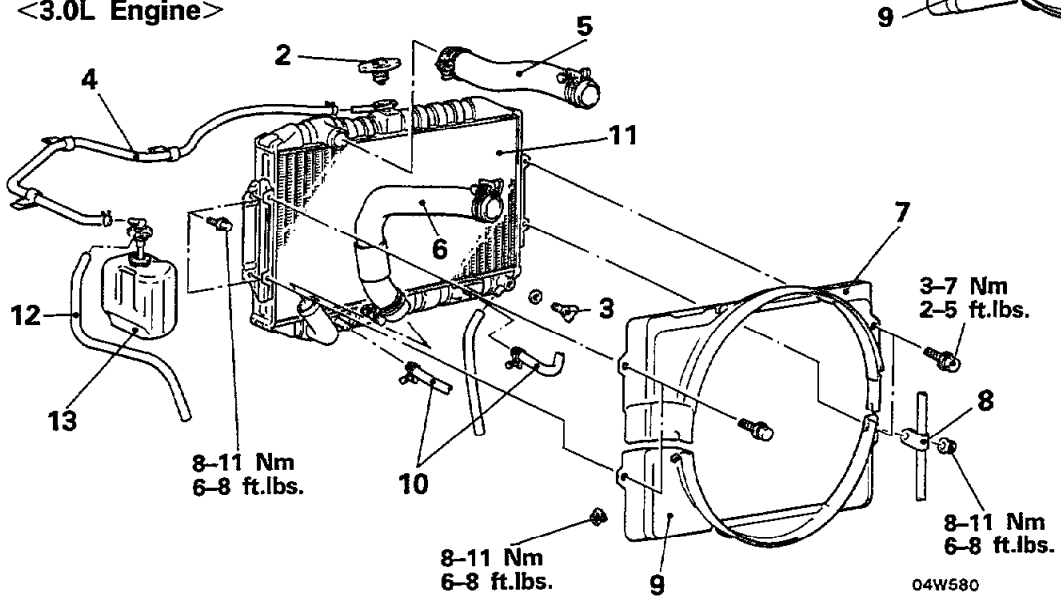
Pre-removal Operation
- Draining of the Coolant (Refer to GROUP 0 – Maintenance Service.)
- Draining of the Automatic Transmission Fluid (Refer to GROUP 0 – Maintenance Service.)

Post-installation Operation
- Supplying of the Coolant (Refer to GROUP 0 – Maintenance Service.)
- Supplying of the Automatic Transmission Fluid (Refer to GROUP 0 – Maintenance Service.)

<2.6L Engine>



<3.0L Engine>



Radiator removal steps

1. Air duct <2.6L Engine>
2. Radiator cap
3. Drain plug
4. Connection for overflow hose
5. Radiator upper hose
6. Radiator lower hose
7. Radiator upper shroud
8. Hose clamp <3.0L Engine>
9. Radiator lower shroud
10. Connection for automatic oil cooler hoses (Vehicles with an automatic transmission)
11. Radiator

Reserve tank removal

4. Connection for overflow hose
12. Overflow tube
13. Reserve tank

NOTE
Reverse the removal procedures to reinstall the radiator.

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INSPECTION

N07QCAB

- Check for foreign material between radiator fins.
- Check the radiator fins for bend or damage.
- Check the radiator for corrosion, damage, rust or scale.
- Check the radiator hoses for cracks, damage or deterioration.
- Check the reserve tank for damage.
- Check the spring of radiator cap for deterioration.
- Check the packing of radiator cap for damage or cracks.

COOLING FAN

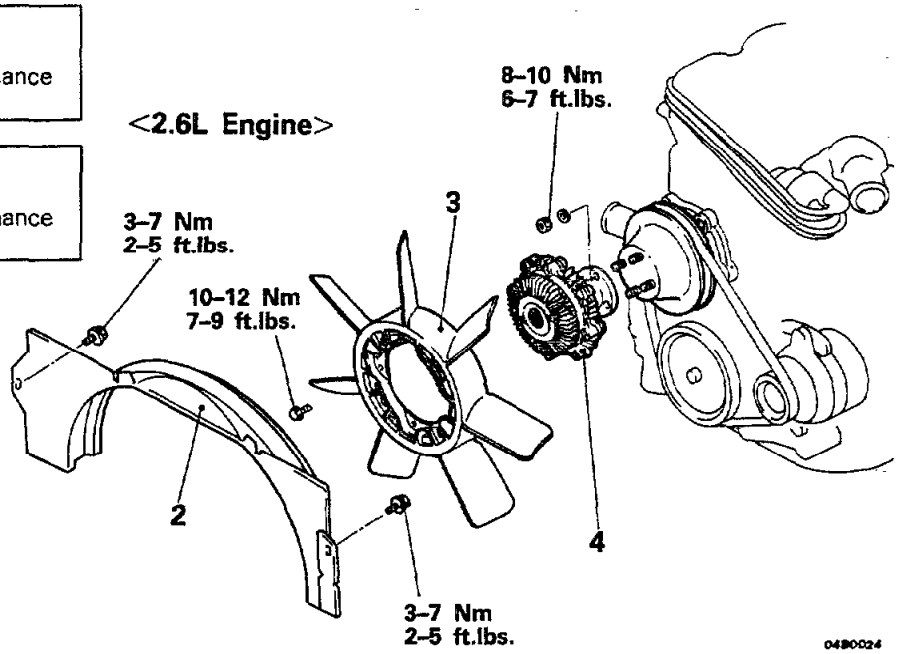
REMOVAL AND INSTALLATION

N07QCAB

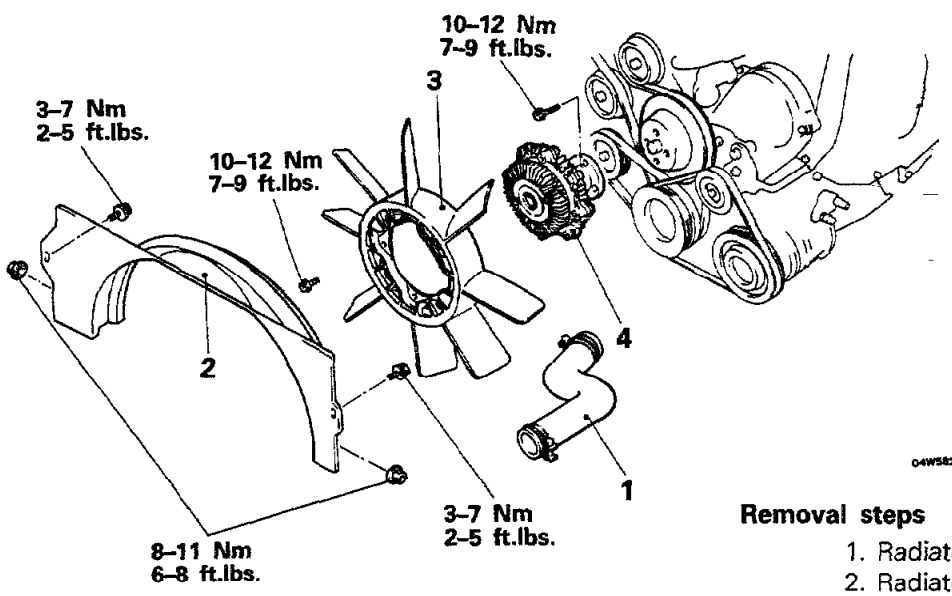
Pre-removal Operation
- Draining of the coolant (Refer to GROUP 0 – Maintenance Service.)

Post-installation Operation
- Supplying of the coolant (Refer to GROUP 0 – Maintenance Service.)

<2.6L Engine>



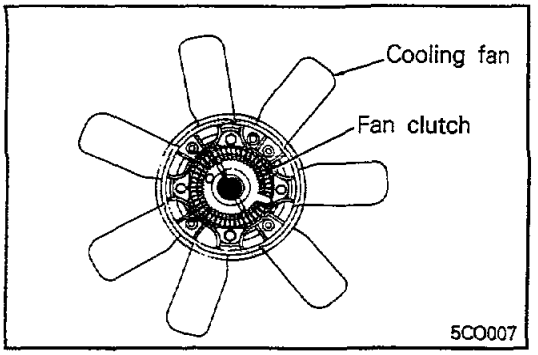
<3.0L Engine>



Removal steps

1. Radiator upper hose <3.0L Engine>
2. Radiator upper shroud
3. Cooling fan
4. Fan clutch

NOTE
Reverse the removal procedures to reinstall.

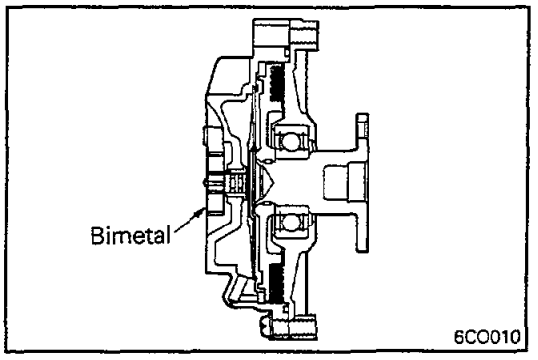


INSPECTION

N07HCAD

COOLING FAN

- Check for cracks and damage around bolt holes in fan hub.
- If any portion of fan is damaged or cracked, replace cooling fan.



FAN CLUTCH

- Check to ensure that fluid in fan clutch is not leaking at case joint and seals. If fluid quantity decreases due to leakage, fan speed will decrease and engine overheating might result.
- When a fan attached to an engine is turned by hand, it should give a sense of some resistance. If fan turns lightly, it is faulty.
- Check bimetal strip for damage.

THERMOSTAT

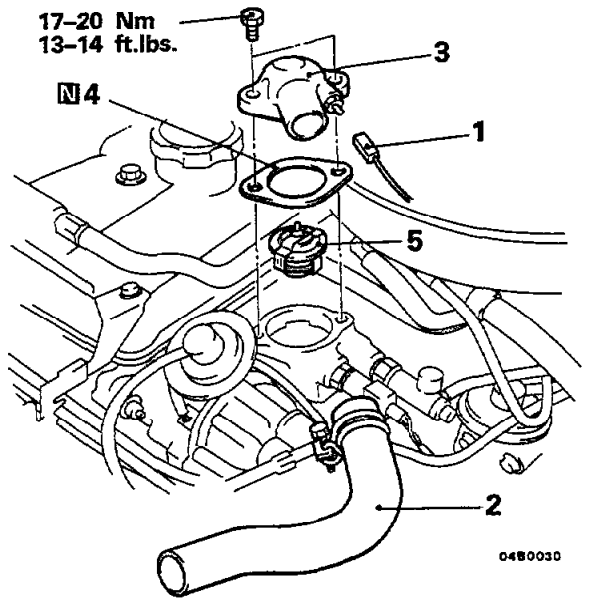
REMOVAL AND INSTALLATION

N07GB-

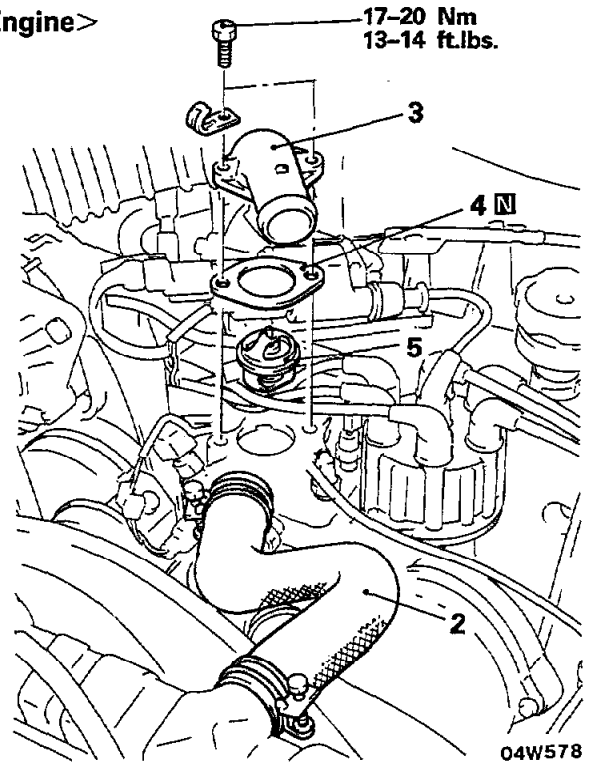
Pre-removal Operation
- Draining of the Coolant (Refer to GROUP 0 – Maintenance Service.)

Post-installation Operation
- Supplying of the Coolant (Refer to GROUP 0 – Maintenance Service.)

<2.6L Engine>



<3.0L Engine>



Removal steps

1. Connection for engine coolant temperature switch connector (Vehicles with an air conditioner) <2.6L Engine>
2. Connection for radiator upper hose
3. Water outlet fitting
4. Water outlet fitting gasket
5. Thermostat

NOTE
(1) Reverse the removal procedures to reinstall.
(2) ◆◆ : Refer to "Service Points of Installation".
(3) N : Non-reusable parts.

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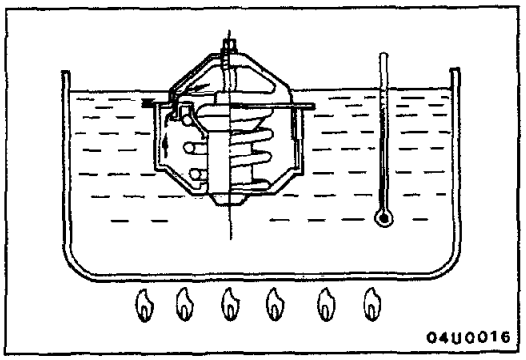
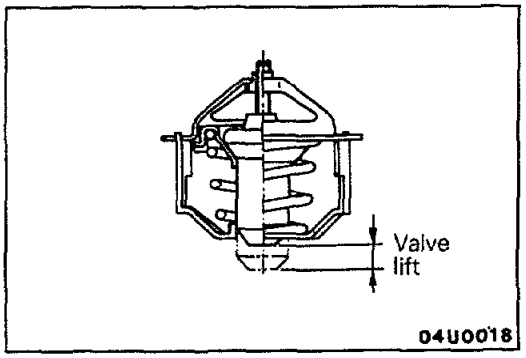
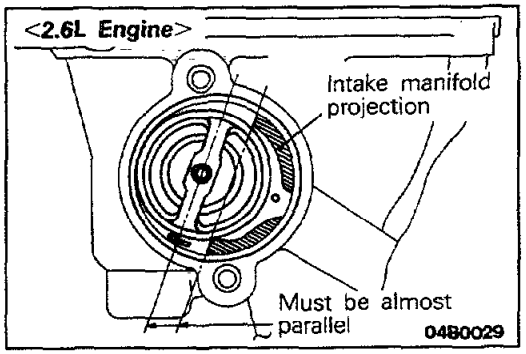
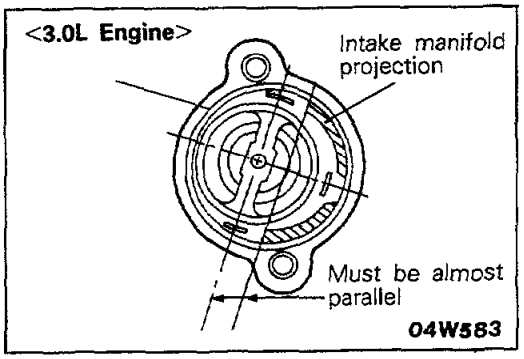








INSPECTION

N07GDAE

THERMOSTAT

- Check that valve closes tightly at room temperature.
- Check for defects or damage.
- Check for rust or encrustation on valve. Remove if any.
- Immerse thermostat in container of water. Stir to raise water temperature and check that thermostat opening valve temperature and the temperature with valve fully open [valve lift-over 8 mm (.31 in.)] are at the standard value.

Standard value:

Opening valve temperature	**88°C (190°F)**
Full-open temperature	**100°C (212°F)**

NOTE
Measure valve height when fully closed. Calculate lift by measuring the height when fully open.

SERVICE POINTS OF INSTALLATION

N07GEAA

5. INSTALLATION OF THERMOSTAT

Install the thermostat to the intake manifold as illustrated.

Caution
The thermostat flange fits over the manifold seat; ensure that the thermostat is not installed at an angle.

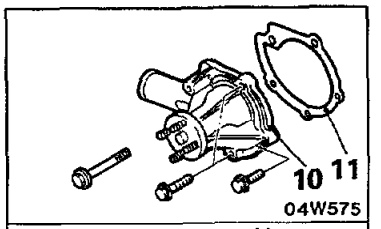
WATER PUMP <2.6L ENGINE>

REMOVAL AND INSTALLATION

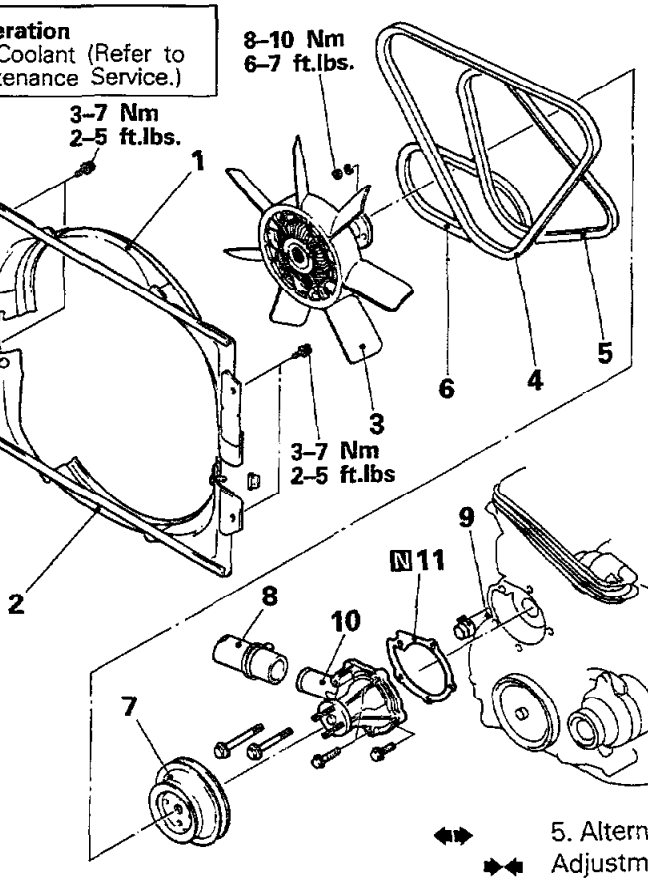
N07MB–

Pre-removal Operation
- Draining of the Coolant (Refer to GROUP 0 – Maintenance Service.)

Post-installation Operation
- Supplying of the Coolant (Refer to GROUP 0 – Maintenance Service.)



Water pump kit



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Removal steps

1. Radiator upper shroud
2. Radiator lower shroud
3. Cooling fan clutch assembly

◆◆ Adjustment of air conditioner compressor drive belt deflection

◆◆ 4. Air conditioner compressor drive belt (Vehicles with an air conditioner)

◆◆ Adjustment of alternator drive belt deflection

◆◆ 5. Alternator drive belt

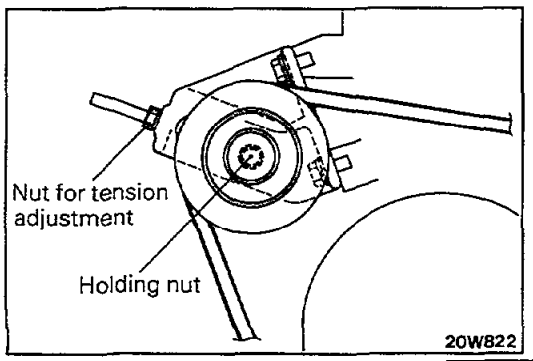
◆◆ Adjustment of power steering oil pump drive belt deflection

6. Power steering oil pump drive belt
7. Water pump pully
8. Connection of radiator lower hose
9. Connection of heater hose

◆◆ 10. Water pump

11. Water pump gasket

NOTE
(1) Reverse the removal procedures to reinstall.
(2) ◆◆ : Refer to "Service Points of Removal".
(3) ◆◆ : Refer to „Service Points of Installation".
(4) N : Non-reusable parts



SERVICE POINTS OF REMOVAL

N07MCAC

4. REMOVAL OF AIR CONDITIONER COMPRESSOR DRIVE BELT

(1) Loosen the nut holding the tension pulley.
(2) Loosen the nut for tension adjustment, and then remove the drive belt.

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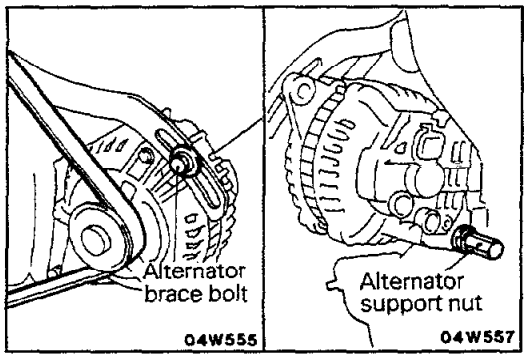
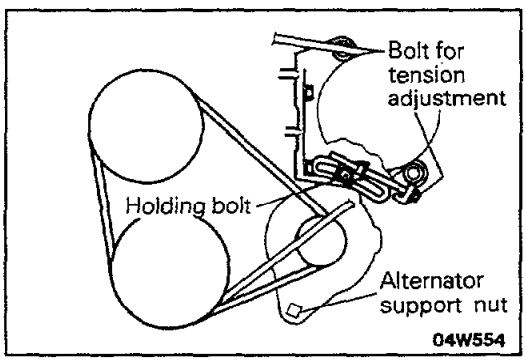


5. REMOVAL OF ALTERNATOR DRIVE BELT

Vehicles without an air conditioner

Loosen the alternator brace bolt and the alternator support nut, and then remove the alternator drive belt.



Vehicles with an air conditioner

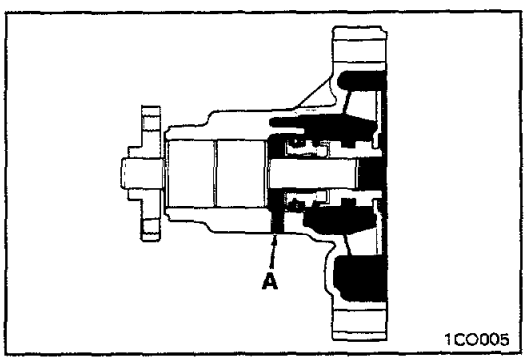
(1) Loosen the bolt holding the alternator and then loosen the alternator support nut.
(2) Loosen the bolt for deflection adjustment, and then remove the alternator drive belt.

INSPECTION

N07MDAH

WATER PUMP

- Check each part for cracks, damage or wear, and replace the water pump assembly if necessary.
- Check the bearing for damage, abnormal noise and sluggish rotation, and replace the water pump assembly if necessary.
- Check the seal unit for leaks, and replace the water pump assembly if necessary.
- Check for water leakage. If water leaks from hole "A" seal unit is faulty. Replace as an assembly.

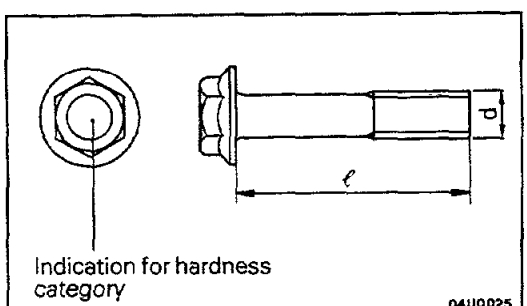


SERVICE POINTS OF INSTALLATION

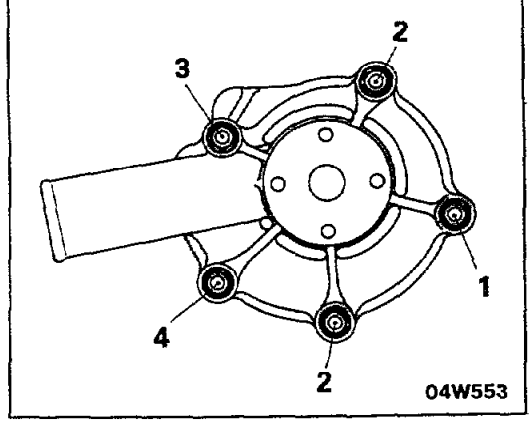
N07MEAKa

10. INSTALLATION OF WATER PUMP

Water pump installation bolt size are different and caution must be paid to ensure that they are properly installed.



No.	Hardness category (Head mark)	d x ℓ mm (in.)	Torque Nm (ft.lbs.)
1	4	8 x 23 (.31 x .90)	12–15 (9–10)
2	4	8 x 28 (.31 x 1.10)	
3	4	8 x 88 (.31 x 3.46)	
4	4	8 x 78 (.31 x 3.07)	



- **ADJUSTMENT OF POWER STEERING OIL PUMP DRIVE BELT DEFLECTION**

  Refer to GROUP 19 – Service Adjustment Procedures.
- **ADJUSTMENT OF ALTERNATOR DRIVE BELT DEFLECTION**

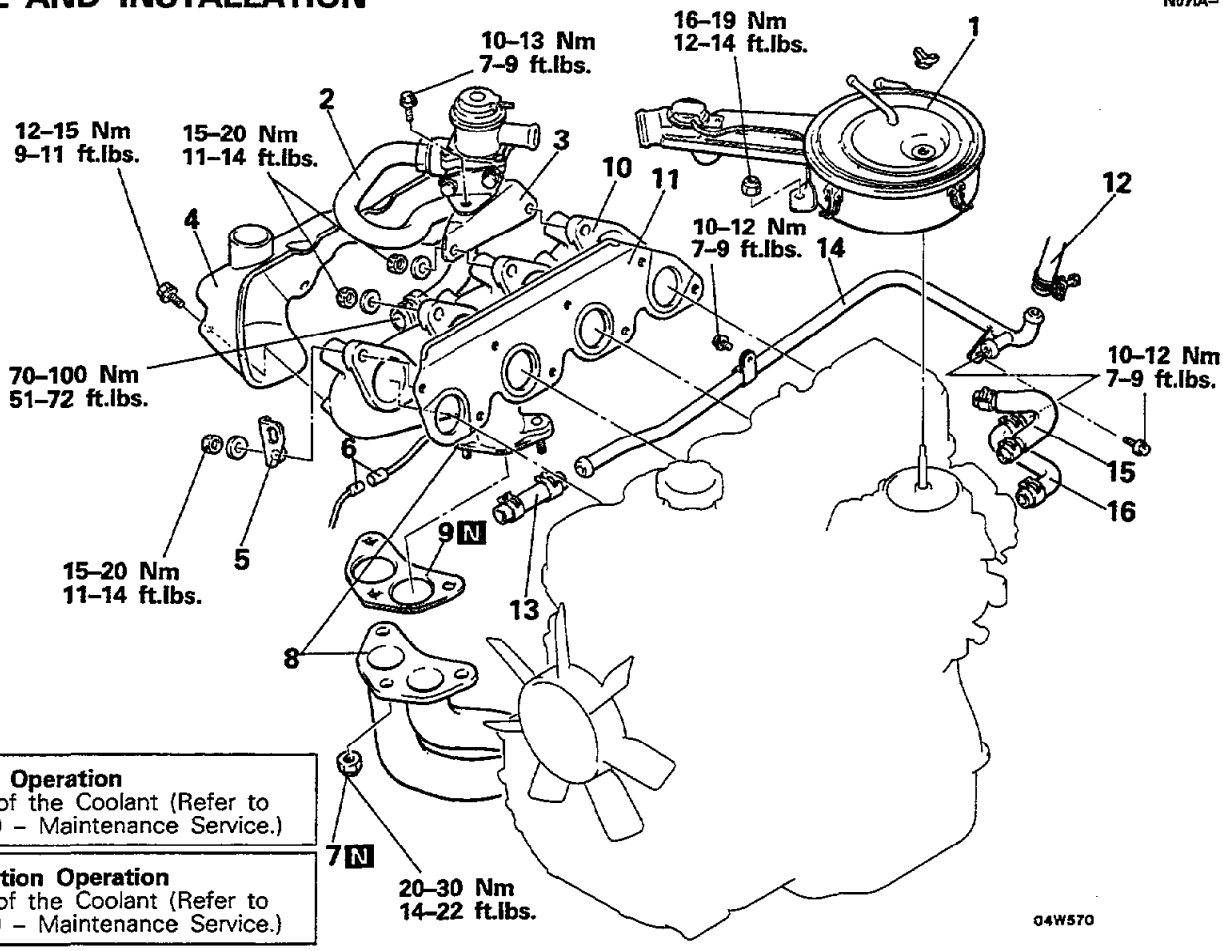
  Refer to P.7-5.
- **ADJUSTMENT OF AIR CONDITIONER COMPRESSOR DRIVE BELT DEFLECTION**

  Refer to GROUP 24 – Service Adjustment Procedures.

WATER HOSE AND PIPE <2.6L ENGINE>

REMOVAL AND INSTALLATION

N07IA-



Pre-removal Operation
- Draining of the Coolant (Refer to GROUP 0 – Maintenance Service.)

Post-installation Operation
- Draining of the Coolant (Refer to GROUP 0 – Maintenance Service.)

Water pipe removal steps

◆◆ ◆◆ 1. Air cleaner
2. Reed valve and air pipe assembly
3. Reed valve bracket
4. Exhaust manifold cover
5. Engine hanger
6. Connection for oxygen sensor connector
7. Self-locking nut
8. Connection for exhaust manifold and exhaust pipe
9. Gasket
10. Exhaust manifold
◆◆ 11. Exhaust manifold gasket
12. Connection for heater hose
13. Heater hose
14. Water pipe

Water hose removal

15. Water hose
16. Water by-pass hose

NOTE
(1) Reverse the removal procedures to reinstall the water pipe.
(2) ◆◆ : Refer to "Service Points of Removal".
(3) ◆◆ : Refer to "Service Points of Installation".
(4) N : Non-reusable parts

SERVICE POINTS OF REMOVAL

N07IBABa

1. REMOVAL OF AIR CLEANER

Refer to GROUP 11 – Air Cleaner.

SERVICE POINTS OF INSTALLATION

N07IDAGa

11. INSTALLATION OF EXHAUST MANIFOLD GASKET

Replace the gasket if there is peeling, flaking or damage.

1. INSTALLATION OF AIR CLEANER

Refer to GROUP 11 – Air Cleaner.

TSB Revision

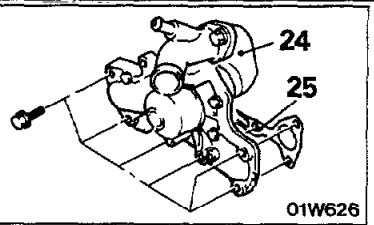
WATER PUMP, WATER PIPE AND WATER HOSE <3.0L ENGINE>

REMOVAL AND INSTALLATION

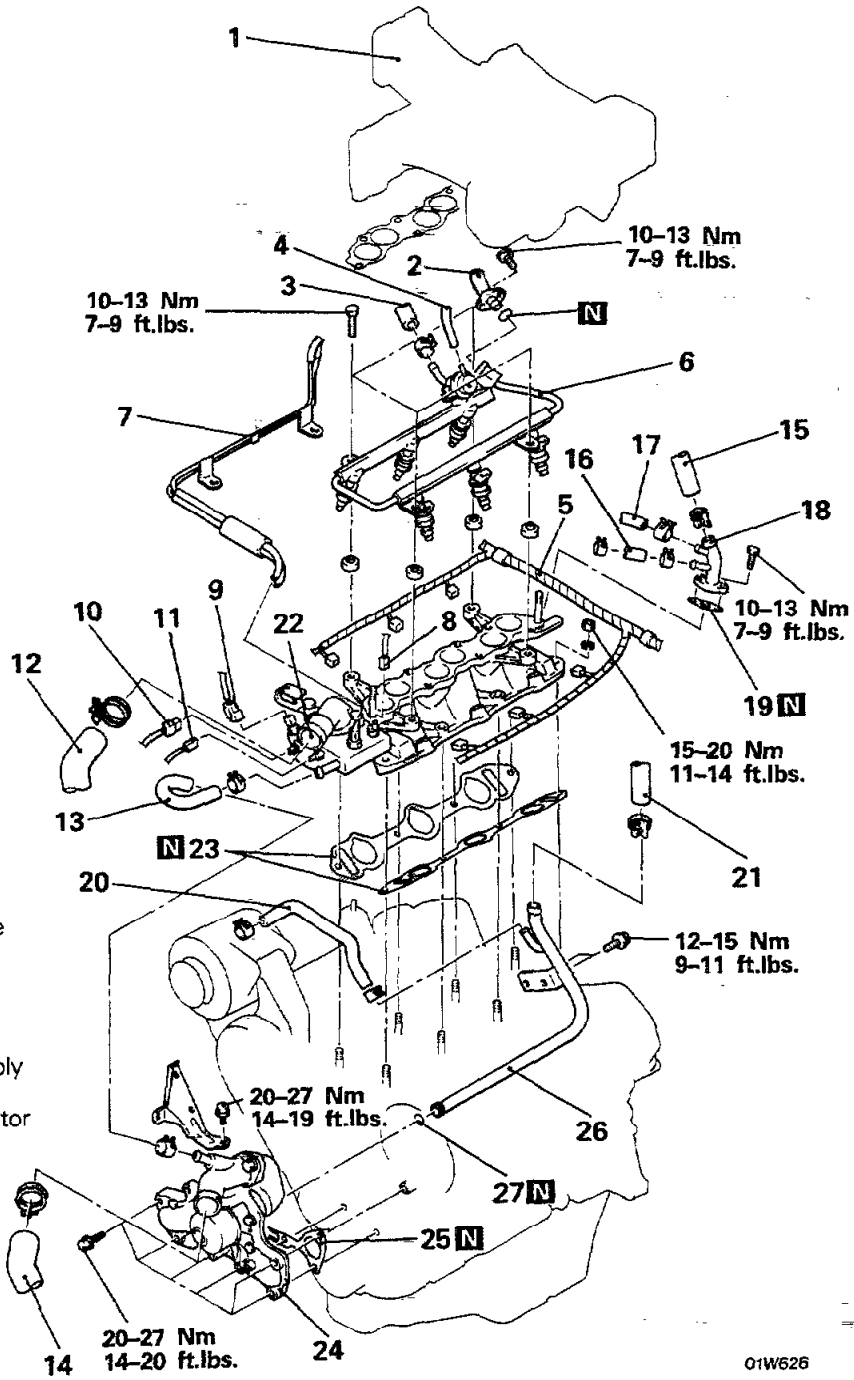
N07UA-

Pre-removal Operation
- Draining of Engine Coolant (Refer to GROUP 0 – Maintenance Service.)
- Lowering of Fuel Pressure in the Fuel Line (Refer to GROUP 14 – Service Adjustment Procedure)
- Removal of the Timing Belt (Refer to GROUP 9 – Timing Belt)

Post-installation Operation
- Installation of the Timing Belt (Refer to GROUP 9 – Timing Belt)
- Filling of Engine Coolant (Refer to GROUP 0 – Coolant Replacement)
- Adjustment of Accelerator Cable (Refer to GROUP 14 – Engine Control)
- Inspection of Fuel Pressure (Refer to GROUP 14 – MPI System)



Water Pump Kit



Removal steps

◆◆ ▶◀ 1. Air intake plenum
◆◆ 2. Connection for fuel high pressure hose
3. Connection for fuel return hose
4. Connection for vacuum hose
5. Connection for control harness
◆◆ 6. Delivery pipe, fuel injector and pressure regulator
7. Vacuum hose and pipe assembly
8. Connection for engine coolant temperature gauge unit connector
9. Connection for engine coolant temperature switch connector (Vehicles with air conditioner)
10. Connection for engine coolant temperature sensor connector
11. Connection for thermo switch connector (Vehicles with automatic transmission)
12. Radiator hose, upper
13. Water by-pass hose
14. Radiator hose, lower
15. Connection for water hose A
16. Water hose "B"
17. Connection for water hose (Vehicles with rear heater)
18. Heater pipe assembly
19. Gasket
20. Water hose "A"
21. Connection for water hose B
◆◆ ▶◀ 22. Intake manifold
23. Gasket
24. Water pump
25. Water pump gasket
▶◀ 26. Water pipe assembly
▶◀ 27. O-ring

NOTE
(1) Reverse the removal procedures to reinstall.
(2) ◆◆ : Refer to "Service Points of Removal".
(3) ▶◀ : Refer to "Service Points of Installation".
(4) N : Non-reusable parts

TSB Revision

SERVICE POINTS OF REMOVAL N07UBAC

1. REMOVAL OF AIR INTAKE PLENUM

Refer to GROUP 11 – Air intake plenum.

2. DISCONNECTION OF FUEL HIGH PRESSURE HOSE

Caution
Cover fuel pipe line with rag after relieving pressure as certain pressure may still remain.

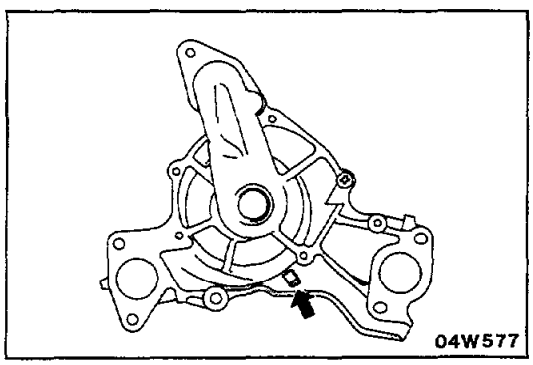
6. REMOVAL OF DELIVERY PIPE, FUEL INJECTOR AND PRESSURE REGULATOR

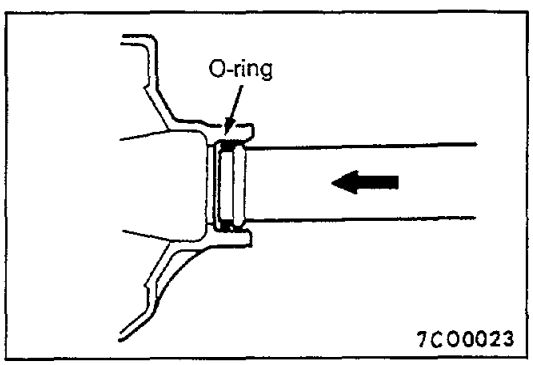
Remove delivery pipe with fuel injector and pressure regulator.

Caution
Do not drop injector when removing delivery pipe.

22. REMOVAL OF INTAKE MANIFOLD

Refer to GROUP 11 – Intake manifold.





INSPECTION N07UCAB

WATER PUMP

- Check each part for cracks, damage or wear, and replace the water pump assembly if necessary.
- Check the bearing for damage, abnormal noise and sluggish rotation, and replace the water pump assembly if necessary.
- Check the seal unit for leaks, and replace the water pump assembly if necessary.
- Check for water leakage if water leaks from hole "A" seal unit is faulty. Replace as an assembly.

SERVICE POINTS OF INSTALLATION N07UDAC

27. INSTALLATION OF O-RING/26. WATER PIPE ASSEMBLY

Insert the O-ring to the water inlet pipe, and coat the outer circumference of the O-ring with water.
By coating with water, the insertion to the water pump will become easier.

Caution
Care must be taken not to permit engine oil or other greases to adhere to the O-ring.

22. INSTALLATION OF INTAKE MANIFOLD

Refer to GROUP 11 – Intake manifold.

1. INSTALLATION OF AIR INTAKE PLENUM

Refer to GROUP 11 – Air intake plenum.

THERMO SWITCH, ENGINE COOLANT TEMPERATURE GAUGE UNIT, ENGINE COOLANT TEMPERATURE SENSOR AND ENGINE COOLANT TEMPERATURE SWITCH

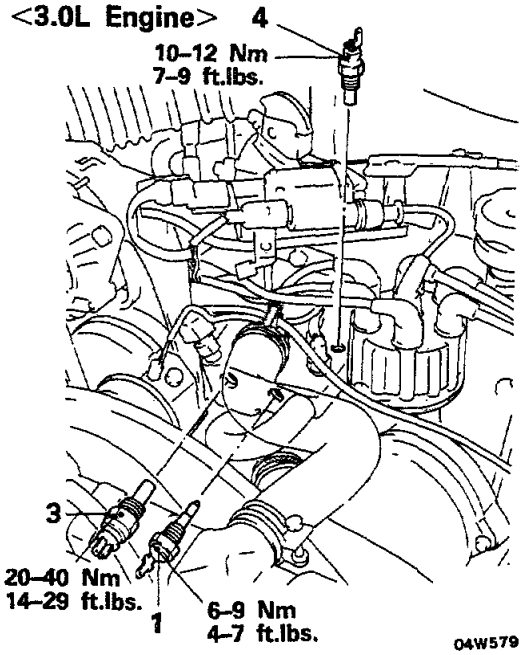
N07OB--

REMOVAL AND INSTALLATION

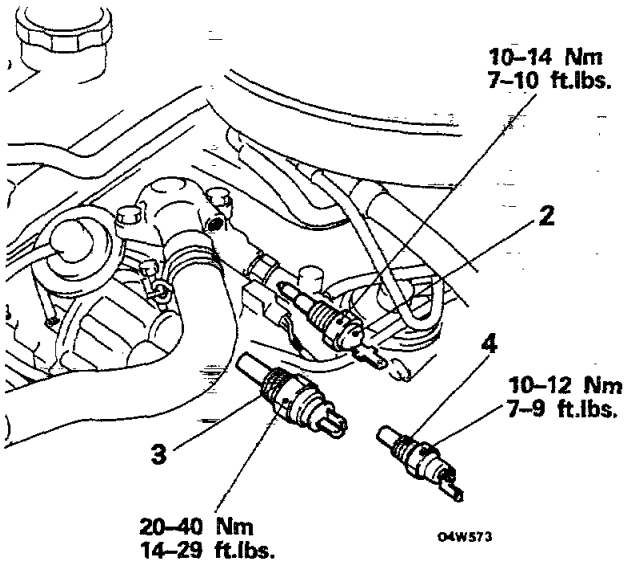
Pre-removal Operation
- Draining of the Engine Coolant (Refer to GROUP 0 – Maintanance Service.)

Post-installation Operation
- Supplying of the Engine Coolant (Refer to GROUP 0 – Maintenance Service.)

<3.0L Engine>

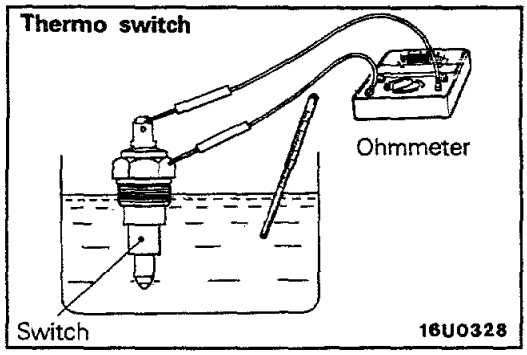


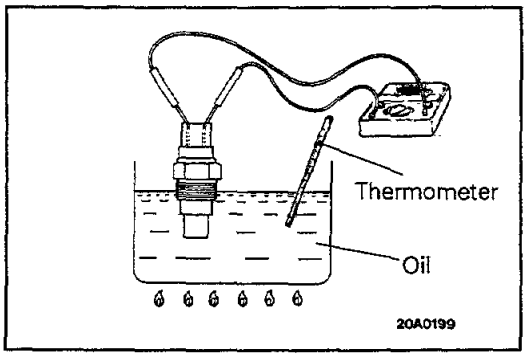
<2.6L Engine>



1. Thermo switch (Vehicles with an automatic transmission)
2. Engine coolant temperature switch (Vehicles with an air conditioner)
3. Engine coolant temperature sensor
4. Engine coolant temperature gauge unit

NOTE
: Refer to "Service Points of Installation".





INSPECTION

N07ODAI

THERMO SWITCH (For automatic transmission control)

Raise engine coolant temperature and check continuity when it reaches the specified temperature.

Standard value :

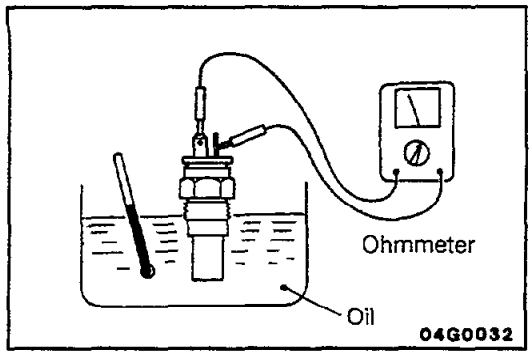
50°C (122°F) or more	**Continuity**
Less than 50°C (122°F)	**No continuity**

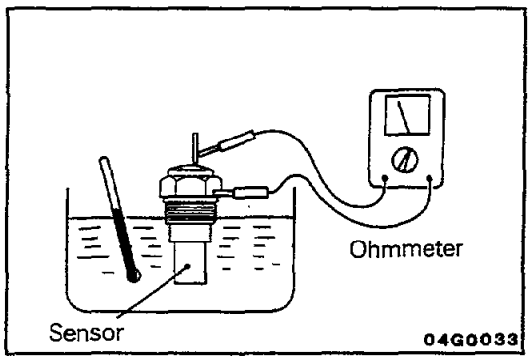
ENGINE COOLANT TEMPERATURE SWITCH (For air conditioner)

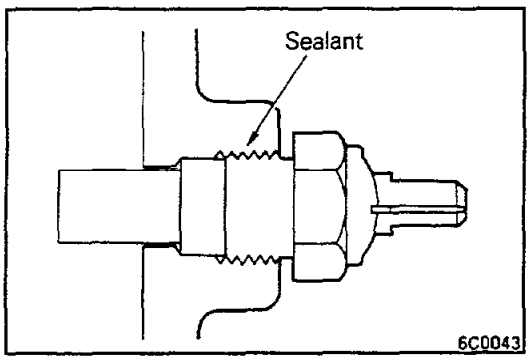
(1) Immerse the engine coolant temperature switch in oil and then heat (by using a gas stove flame or similar method) so as to increase the oil temperature.
(2) Check to be sure that the engine coolant temeprature switch is switched OFF when the oil temperature reaches the standard value.

Standard value : 112–118°C (234–244°F)

Caution
The oil used above should be engine oil and should be stirred well while being heated; do not heat more than necessary.







ENGINE COOLANT TEMPERATURE GAUGE UNIT

(1) Immerse the engine coolant temperature switch in oil and then heat (by using a gas stove flame or similar method) so as to increase the oil temperature.
(2) Measure the resistance if within the standard value.

Standard value :

At 70°C (158°F)	**104±13.5 Ω**
At 115°C (239°F)	**23.8±2.5 Ω**

Caution
The oil used above should be engine oil and should be stirred well while being heated; do not heat more than necessary.

ENGINE COOLANT TEMPERATURE SENSOR (For engine control)

Raise the water temperature and measure the resistance if within the standard value.

Standard value :

At 20°C (68°F)	**2.45±0.24 kΩ**
At 80°C (176°F)	**296±32 Ω**

SERVICE POINTS OF INSTALLATION N070EAG

1. INSTALLATION OF THERMO SWITCH/2. ENGINE COOLANT TEMPERATURE SWITCH/3. ENGINE COOLANT TEMPERATURE SENSOR/4. ENGINE COOLANT TEMPERATURE GAUGE UNIT

Apply sealant to threaded portion and tighten.

Specified sealant : 3M ART Part No. 8660 or equivalent

NOTE