

## SECTION 15

# INTAKE & EXHAUST

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#### General Information

The following servicing information has been issued in conjunction with changes to the 4G63-MPI-T/C engine on the new Lancer Evolution VIII.

Other servicing information remains the same.

- Change to turbocharger supercharging pressure
- Change to air by-pass valve operation opening pressure
- Change to intercooler
- Change to intercooler water spray hose
- Change to air by-pass valve and air hose
- Deletion of EGR valve and manifold differential pressure (MDP) sensor

#### Servicing specifications

Item	Standard value
Turbocharger supercharging pressure kPa	89 and 138
Air by-pass valve operation opening pressure kPa	About 61

#### ON-VEHICLE SERVICING

##### 1. Turbocharger supercharging pressure check

The turbocharger supercharging pressure has been changed.

**Standard value: 89 and 138kPa**

##### 2. Air by-pass valve check

Air by-pass valve standard value has been changed.

**Standard value:**

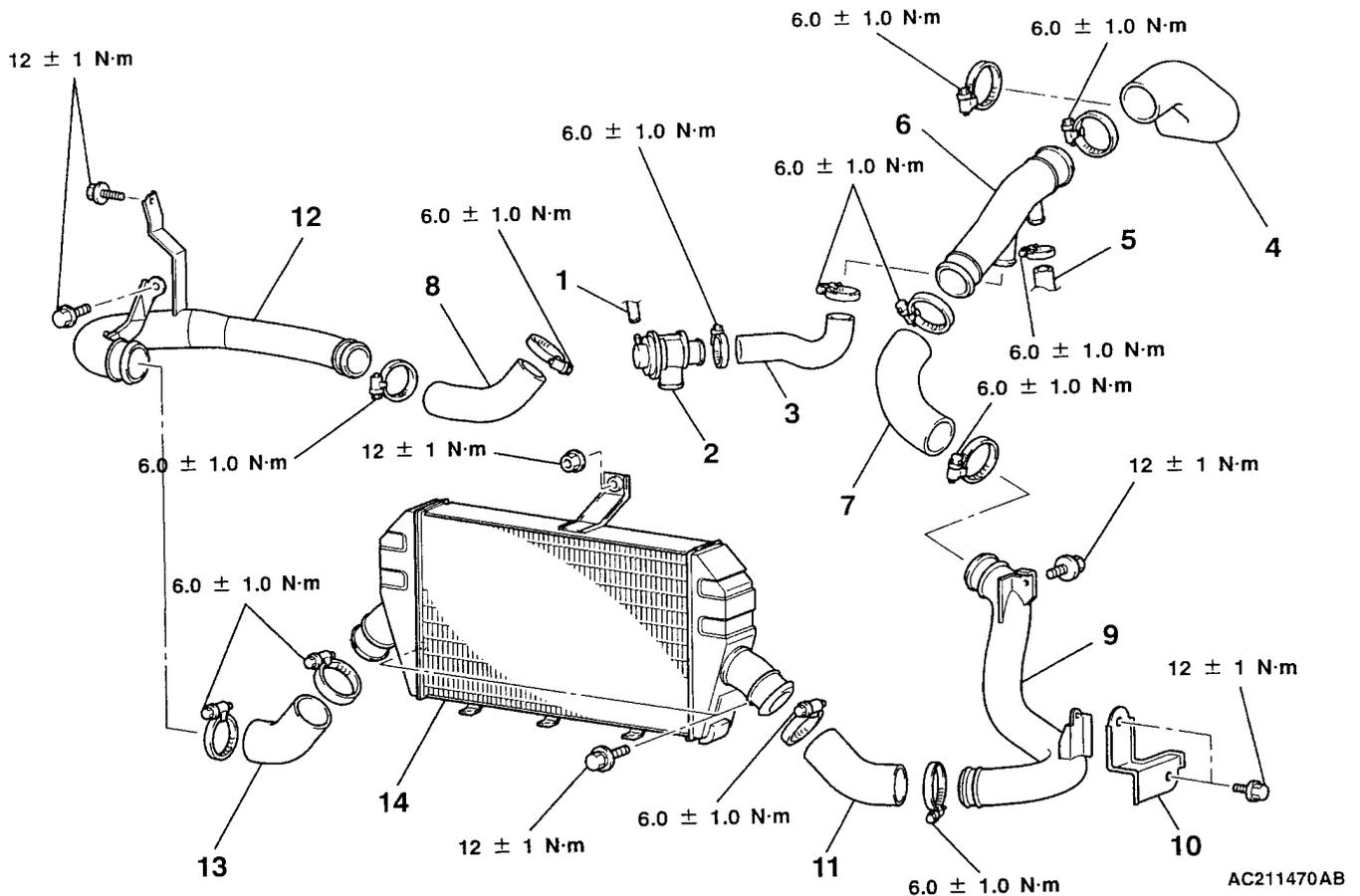
Negative pressure	Valve operation
About 61kPa	Starts to open

## Intercooler

## Removal and fitting

## Pre-removal and post-fitting operations

- Removal and fitting of air duct and air cleaner ASSY



## Removal procedure

1. Vacuum hose connection
2. Air by-pass valve ASSY
3. Air by-pass hose
4. Air hose E
5. Air hose connection (secondary air control system)
6. Air pipe C
7. Air hose D
- Cover (ref. Chapter 51)

## 8. Air hose A

- Front bumper ASSY (ref. Chapter 51)

## 9. Air pipe B

## 10. Bracket

## 11. Air hose C

## 12. Air pipe A

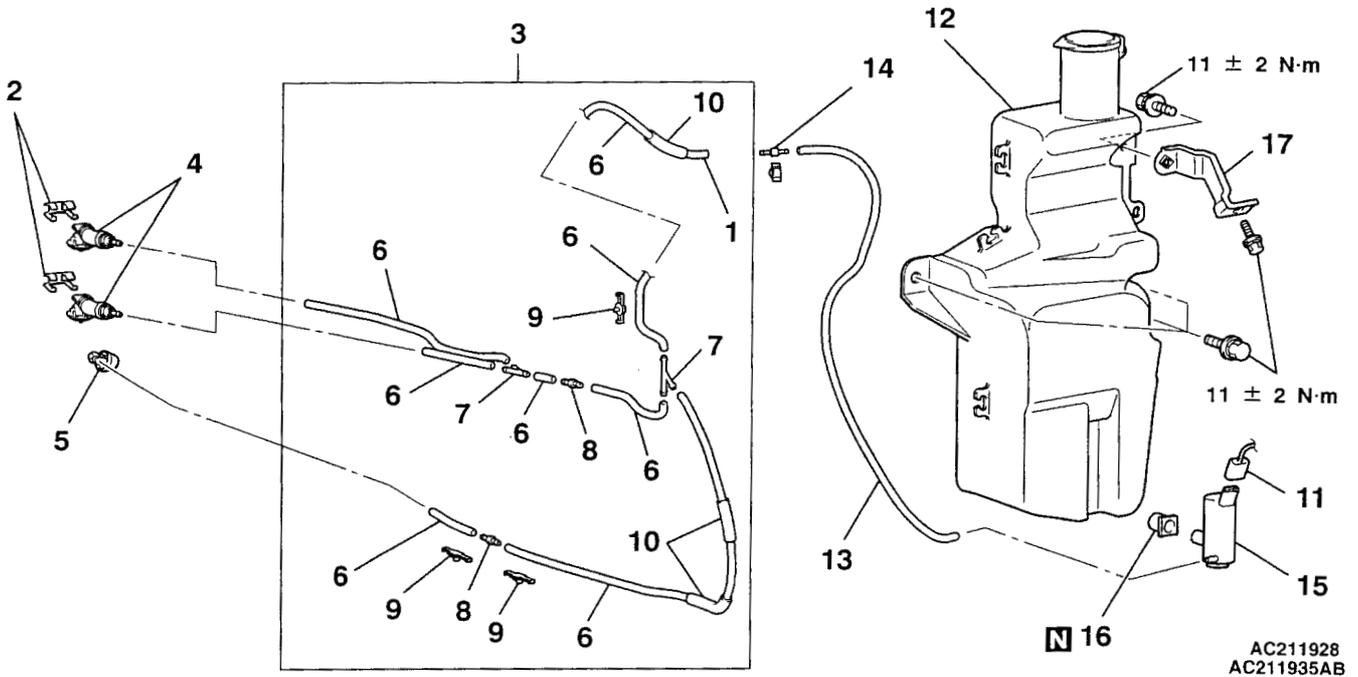
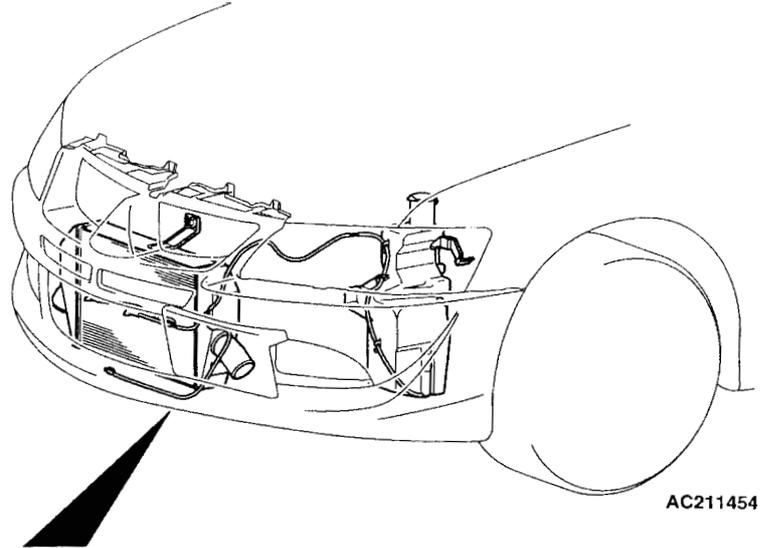
## 13. Air hose B

## 14. Intercooler ASSY

Intercooler Water Spray

Removal and fitting

<Water spray nozzle, hose, washer tank>



**Water spray nozzle and hose disassembly procedure**

1. Water spray hose connection
  - Front bumper ASSY (ref. Chapter 51)
- ▶ A ◀ • Tape (for mounting water spray hose ASSY)
2. Clamp
- ▶ A ◀ 3. Water spray hose ASSY
4. Water spray nozzle (upper side)
5. Water spray nozzle (lower side)
6. Water spray hose
7. Three-way joint

8. Washer valve
  - Tape (for attaching clip)
9. Clip
10. Pad

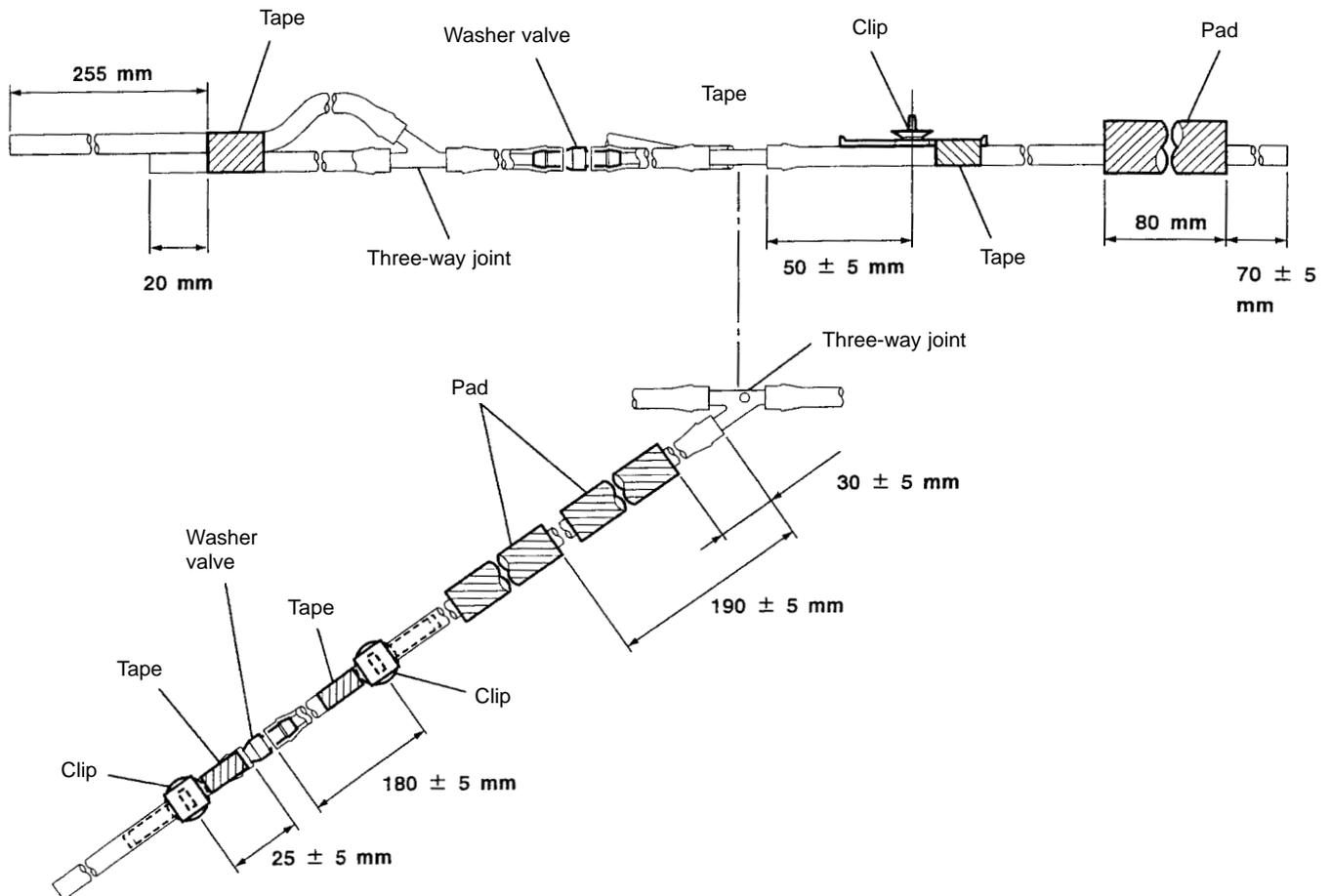
**Washer tank removal procedure**

1. Water spray hose connection
11. Harness connector connection
12. Washer tank
13. Water spray hose
14. Washer valve
15. Water spray motor
16. Packing
17. Bracket

**Fitting**

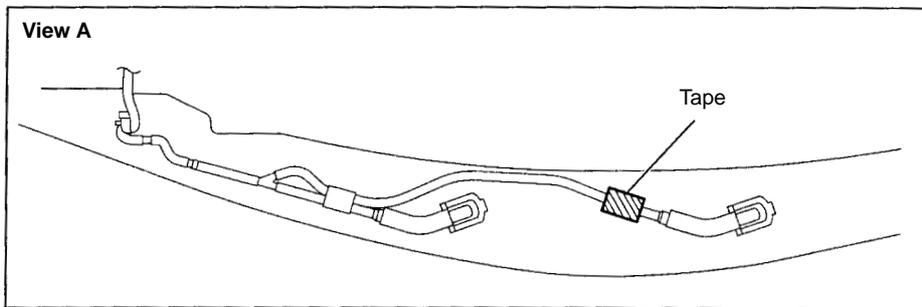
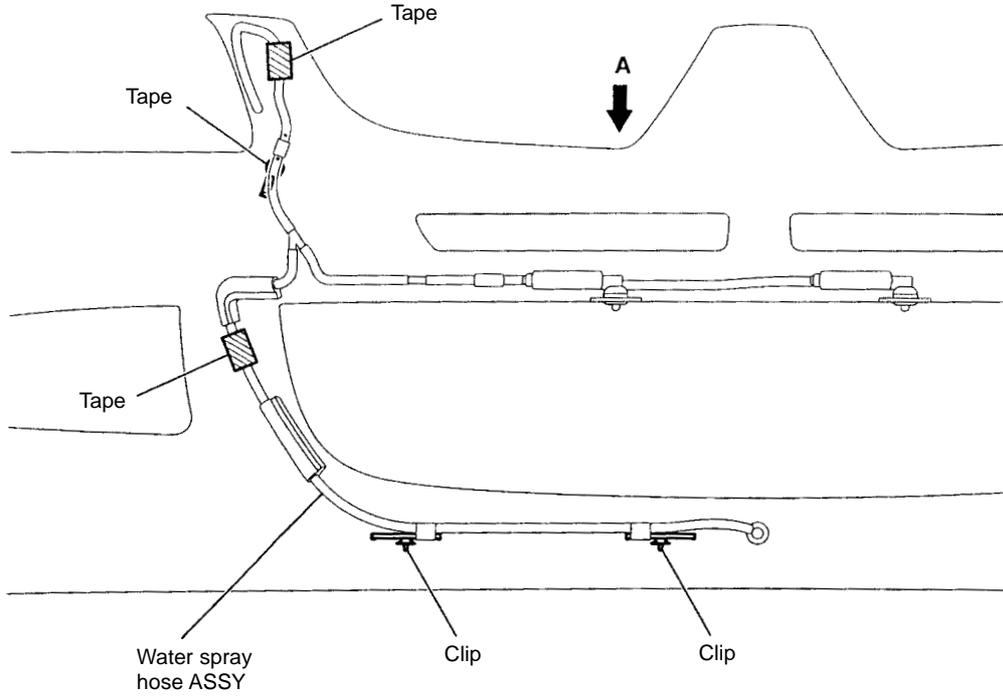
▶ A ◀ **Fitting water spray hose ASSY/Tape (for mounting water spray hose ASSY)**

1. After fitting water spray hose, three-way joint, and washer valve, stick on pads, clip, and tape as shown in the diagram.



2. Attach the water spray hose ASSY to the front bumper using the water spray hose ASSY clip.
3. Stick tape on as illustrated, so that the water spray hose ASSY does not slip.

### View of front bumper rear surface



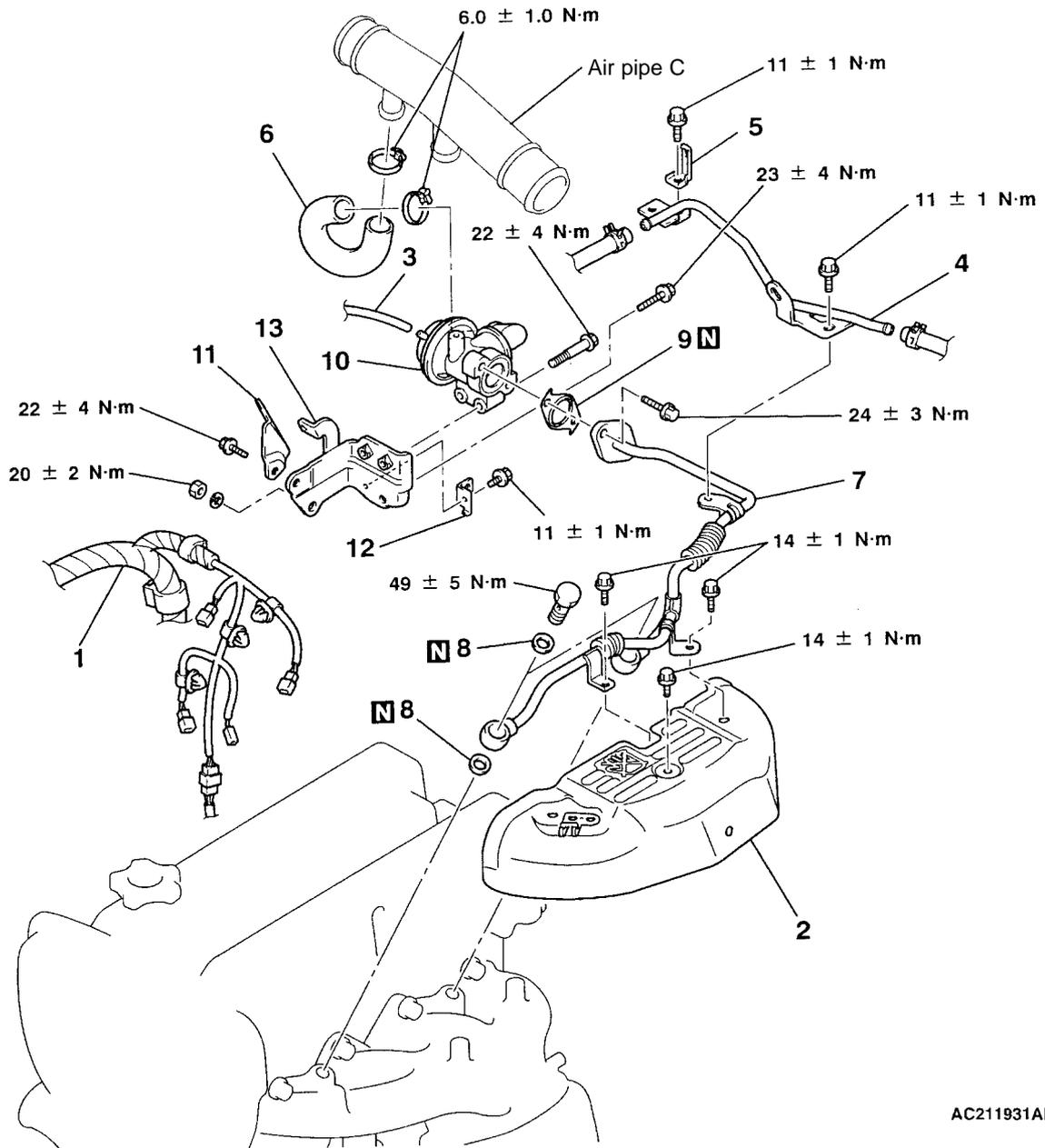
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## Secondary Air Control System

### Removal and fitting

#### Pre-removal and post-fitting operations

- Removal and fitting of the air duct
- Removal and fitting of the strut tower bar

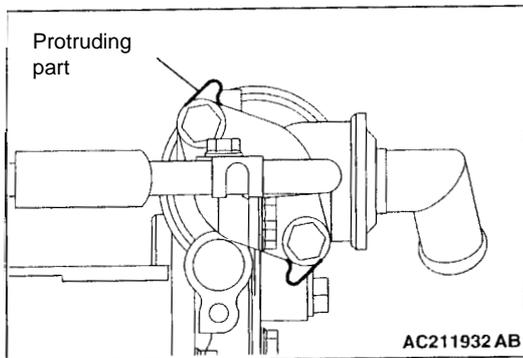


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#### Removal procedure

1. Control harness connection
2. Heat protector
3. Vacuum hose connection
  - Air pipe C (ref. P.15-8)
4. Vacuum pipe
5. Harness bracket (secondary air control system)

6. Air hose
7. Air pipe ASSY
8. Gasket
9. Gasket
10. Secondary air control valve
11. Engine hanger
12. Harness bracket
13. Air control valve bracket



**FITTING**

▶ **A ◀ Gasket fitting**

Fit so that the gasket protruding part points in the direction indicated in the diagram.

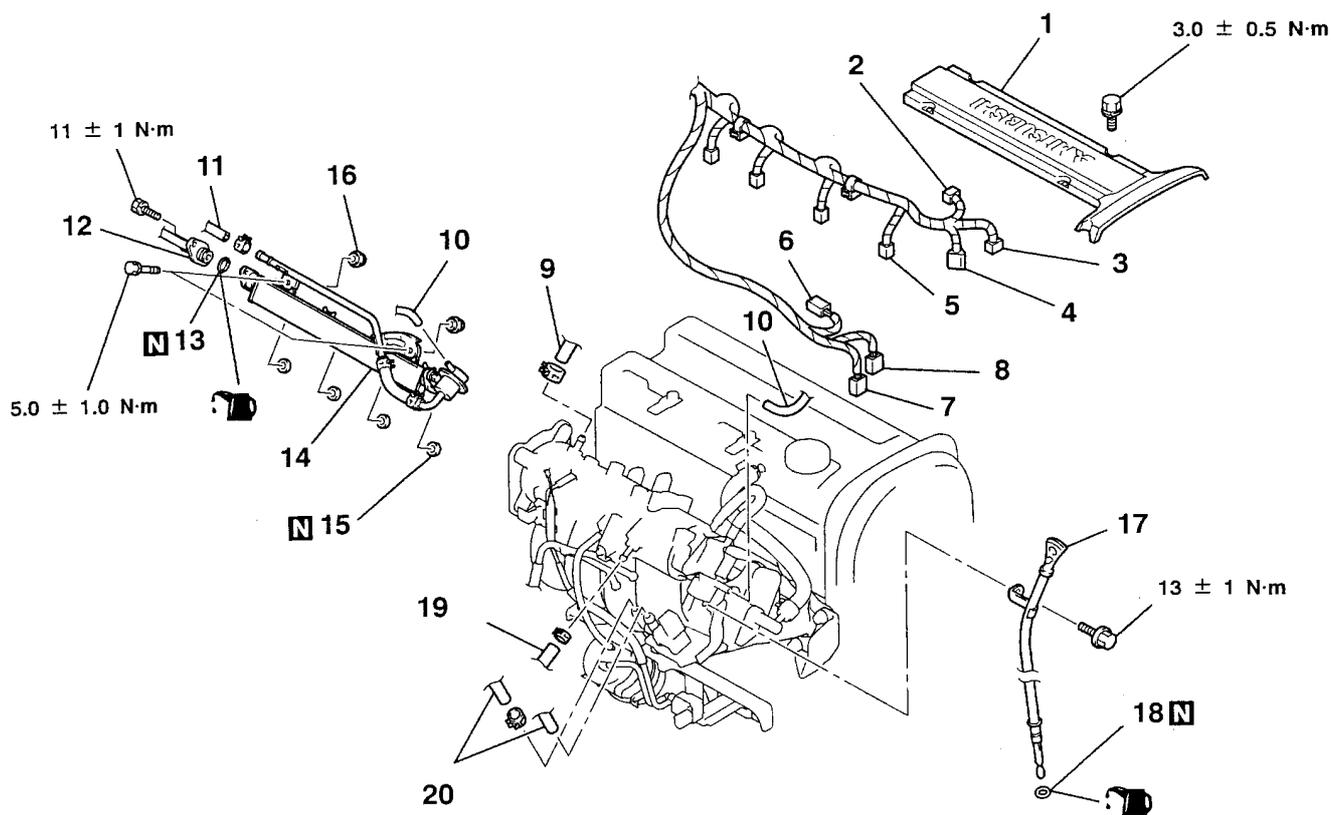
**Inlet manifold**

**Fitting and removal**

**Pre-removal and post-fitting operations**

- Measures to prevent any leakage of fuel <pre-removal only>
- Removal and fitting of cover (ref. Chapter 51 – Front Bumper)
- Draining and filling of coolant
- Removal and fitting of air duct
- Removal and fitting of strut tower bar

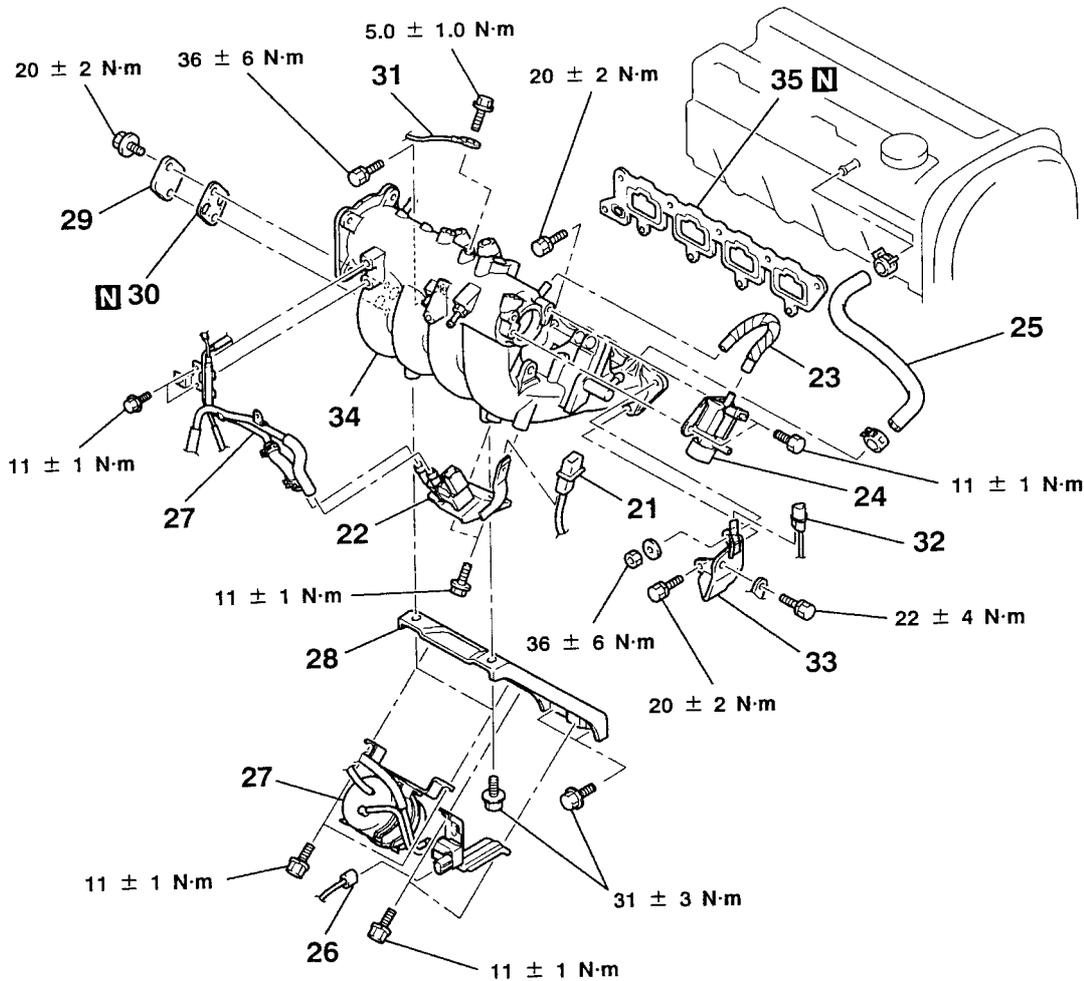
- Removal and fitting of throttle body
- Removal and fitting of air control valve bracket (P.15-6)
- Removal and fitting of cross member bar
- Removal and fitting of front exhaust pipe



**Removal procedure**

1. Centre cover
2. Ignition coil connector connection
3. O<sub>2</sub> sensor connector connection
4. Crank angle sensor connector connection
5. Injector connector connection
6. Fuel pressure solenoid valve connector connection
7. Purge solenoid valve connector connection
8. Knock sensor connector connection
9. Vacuum hose connection
10. Vacuum hose
11. Fuel return hose connection

12. Fuel high pressure hose connection
13. O-ring
14. Delivery pipe, injector & fuel pressure regulator ASSY
15. Insulator
16. Insulator
17. Oil level gauge & guide ASSY
18. O-ring
19. Brake booster vacuum hose connection
20. Purge hose connection



## Removal procedure

- |   |  |
|---|--|
| 21. Knock sensor connector connection       | 27. Vacuum tank, ACV solenoid valve, vacuum hose & pipe ASSY |
| 22. Purge control solenoid valve ASSY       | 28. Inlet manifold stay                                      |
| 23. Vacuum hose                             | 29. Cover  |
| 24. Fuel pressure solenoid valve ASSY       | 30. Gasket   |
| 25. PCV hose                                | 31. Earth cable connection                                   |
| • Alternator                                | 32. Crank angle sensor connector connection                  |
| 26. ACV solenoid valve connector connection | 33. Alternator brace stay                                    |
|   | 34. Inlet manifold   |
|   | 35. Inlet manifold gasket                                    |

## REMOVAL

### ◀ A ▶ Delivery pipe, injector and fuel pressure regulator ASSY removal

Remove the delivery pipe with the injector and fuel pressure regulator attached.

## CAUTION

**When removing the delivery pipe, be careful not to drop the injector.**

## FITTING

### ▶ A ◀ Fuel high pressure hose connection

1. Apply a small quantity of new engine oil to the O-ring, then insert the O-ring into the delivery pipe without damaging it.
2. Check that the high pressure hose turns smoothly. When it does not turn smoothly, it is possible that the O-ring is being pinched, in which case remove the high pressure hose and, after checking to see if the O-ring is damaged, re-insert into the delivery pipe.
3. Tighten mounting bolt to specified torque.

**Specified torque: 5.0 ± 1.0 N·m**