INTAKE AND EXHAUST

CONTENTS

E15AA--

SPECIFICATIONS

GENERAL SPECIFICATIONS

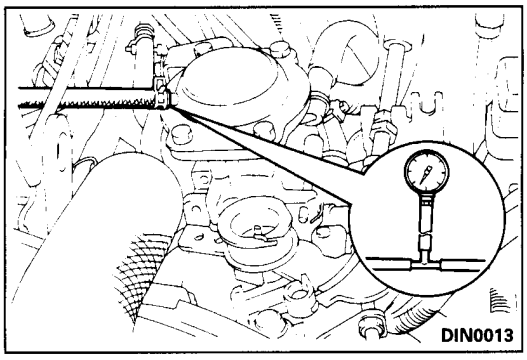
E15CA--

Items	Specifications
Air filter	
Type	Dry type
Element	Unwoven cloth type
Exhaust system	
Front exhaust pipe	
<4G64, 6G72, 6G74>	Dual type
<4D56, 4M40>	Single type
Muffler	Expansion resonance type
Coupling	Spherical coupling and flat coupling
Suspension system	Rubber hangers and rubber suspenders
Turbocharger	
Type	Exhaust gas turbine type
Identification No.	
<4D56>	TD04–11G–4
<4M40>	TD04–12T–4
Supercharging pressure control	Waste gate actuator
Intercooler	
Type	Air cooled type

SERVICE SPECIFICATIONS

E15CB--

Items	Standard	Limit
Intake and exhaust manifolds		
Distortion of cylinder head contacting surface mm (in.)	Less than 0.15 (0.0059)	0.3 (0.012)
Turbocharger		
Initial starting pressure of waste gate actuator kPa (kg/cm^2, psi)		
<4D56>	82 (0.84, 12)	—
<4M40>	89 (0.91, 13)	—



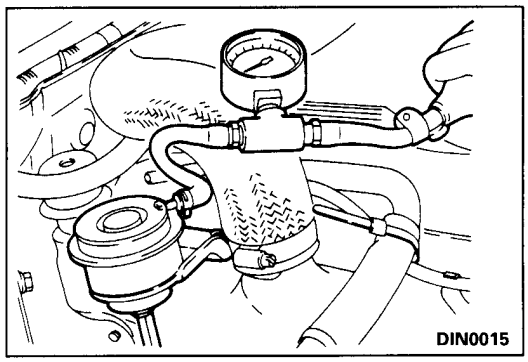
SERVICE ADJUSTMENT PROCEDURES

TURBOCHARGER SUPERCHARGING PRESSURE INSPECTION <4D56> E15FDAC

Caution
The driving test should be carried out by two people at a place where fully-open acceleration can be done, and reading of the measurement values on the pressure gauge should be made by the person in the passenger seat.

(1) Remove the hose that is connected to the fuel injection pump boost compensator, and install the pressure gauge via the T-joint, as shown in the illustration.
(2) Accelerate the vehicle in second gear (M/T) or L range (A/T) with the throttle fully open, and take a reading of the measurement value on the pressure gauge when the engine speed reaches approximately 3,000 r/min.
(3) If the pressure is not positive pressure, the reason is probably one of the following, so carry out the following inspection.
- Waste gate actuator is defective
- Leaking turbo pressure
- Turbocharger is defective

(4) If the turbo pressure is 82 kPa (0.84 kg/cm², 12 psi.), the reason is probably an abnormality in the turbo pressure control, so carry out the following inspection.
- Waste gate actuator rubber hose is disconnected or burst
- Waste gate actuator is defective
- Waste gate valve is defective



WASTE GATE ACTUATOR INSPECTION <4D56, 4M40> E15FEAD

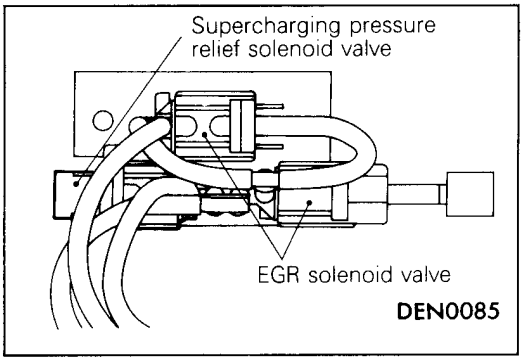
(1) Connect a hand pump (pressurization type) to the nipple.
(2) While gradually increasing the pressure, check the pressure where the waste gate actuator rod begins to move [approx. 1mm (0.04 in.) stroke)]

Standard value:

<4D56>	**82 kPa (0.84 kg/cm², 12 psi.)**
<4M40>	**89 kPa (0.91 kg/cm², 13 psi.)**

Caution
To prevent damage to the diaphragm, do not apply pressure more than 90 kPa (0.9 kg/cm², 13 psi.) <4D56> or more than 115 kPa (1.17 kg/cm², 17 psi.) <4M40>.

(3) If the value is widely outside the standard value, inspect the actuator or the waste gate valve, and replace if necessary.



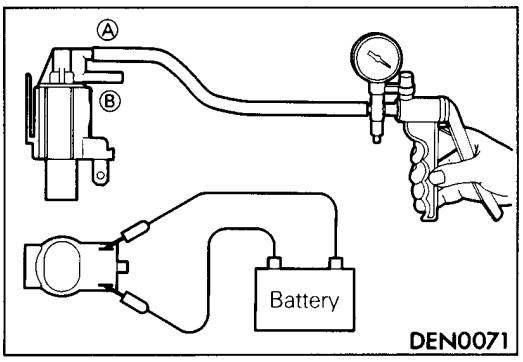
INTAKE MANIFOLD VACUUM INSPECTION E15FBAB

Refer to GROUP 11 – Service Adjustment Procedures.

SUPERCHARGING PRESSURE CONTROL SYSTEM INSPECTION <Vehicles with supercharging pressure relief solenoid valve>

(1) Remove the vacuum hose (yellow) from the supercharging pressure relief solenoid valve and plug the hose.
(2) Connect a hand vacuum pump to the supercharging pressure relief solenoid valve.
(3) Check the vacuum condition.

Engine condition	Normal condition
Idling	0 mmHg
2,000 r/min.	300 mmHg (12 in.Hg) or more

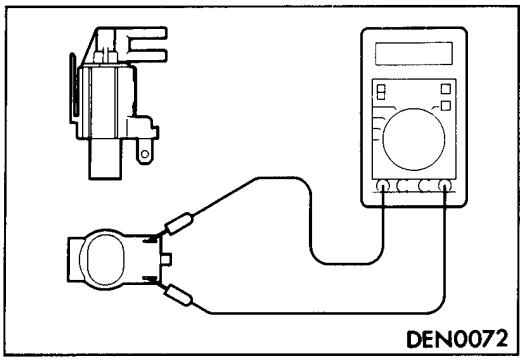


SUPERCHARGING PRESSURE RELIEF SOLENOID VALVE INSPECTION <Vehicles with supercharging pressure relief solenoid valve>

OPERATION INSPECTION

(1) Connect a hand vacuum pump to the solenoid valve nipple Ⓐ (see the illustration to the left).
(2) Using a jumper wire, connect between the solenoid valve terminal and battery terminal.
(3) Connecting and disconnecting the jumper wire at the battery negative terminal to apply a negative pressure, check tightness.

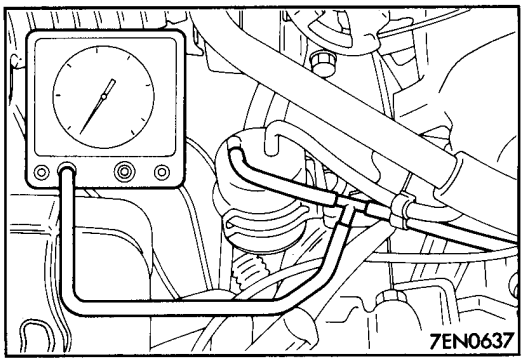
Jumper wire	Ⓑ nipple condition	Normal condition
Connected	Open	Negative pressure leaks.
	Close	Negative pressure is held.
Disconnected	Open	Negative pressure is held.



COIL RESISTANCE INSPECTION

Measure resistance between solenoid valve terminals.

Standard value: 36 – 44 Ω [at 20°C (68°F)]

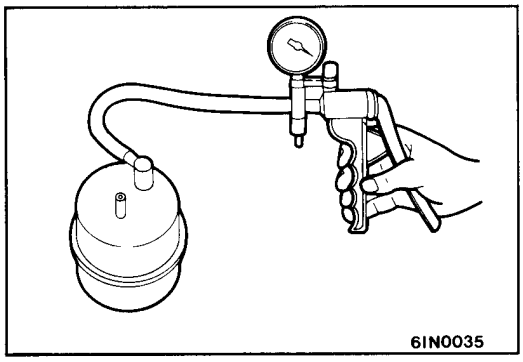


VARIABLE INDUCTION CONTROL SYSTEM INSPECTION <6G74>

(1) Warm up the engine.
(2) Connect a tachometer.
(3) Use a three-way joint to connect a vacuum gauge between the variable induction control solenoid valve and the vacuum motor.
(4) Start the engine, check to be sure that vacuum is applied to the vacuum gauge and check the following items.

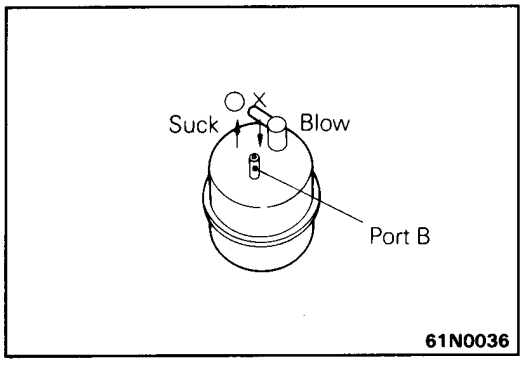
Engine revolution	Normal condition	Solenoid valve
3200 r/min or less	Vacuum maintained	Closed
Race the engine suddenly at 3200 r/min or less	Vacuum does not change	Closed
3400 r/min or more	Vacuum leaks	Open

(5) Check to be sure that the rod of vacuum motor is operating during these checks.

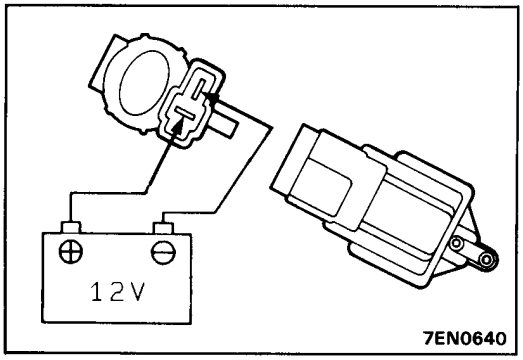


VACUUM TANK INSPECTION

(1) Install a hand vacuum pump to port A and check to be sure that air-tightness is maintained when 503 mmHg of negative pressure is applied.
After checking, remove the hand vacuum pump.



(2) Check to be sure that air passes through when port B is sucked, and that air does not pass through when port B is blown.

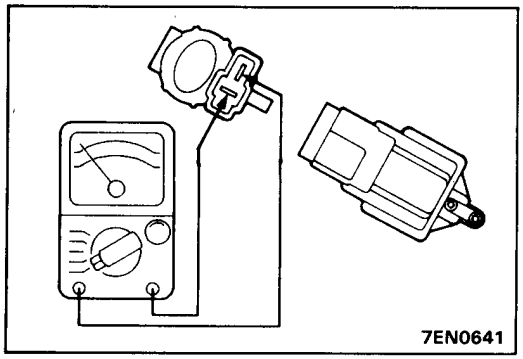


VARIABLE INDUCTION CONTROL SOLENOID VALVE INSPECTION

OPERATION CHECK

(1) Use a hand vacuum pump to apply vacuum to the vacuum tank (white vacuum hose connected) side nipple.
(2) Check air-tightness by applying voltage to the solenoid valve terminals.

Battery voltage	The other nipple of the valve	Normal condition
Applied	Open	Vacuum leaks
	Close with a finger	Vacuum maintained
Not applied	Open	Vacuum maintained



COIL CONTINUITY CHECK

Use an ohmmeter to measure the resistance.

Standard value: 36 – 44 Ω (at 20°C)

NOTES

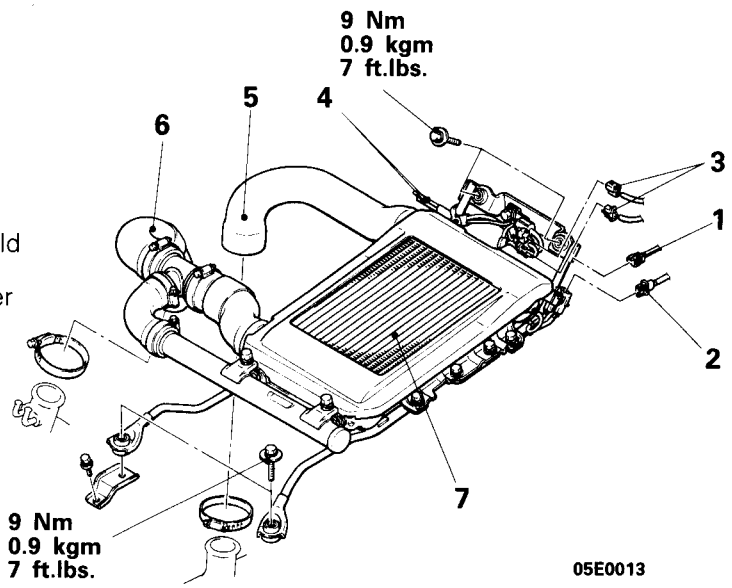
INTERCOOLER <4D56>

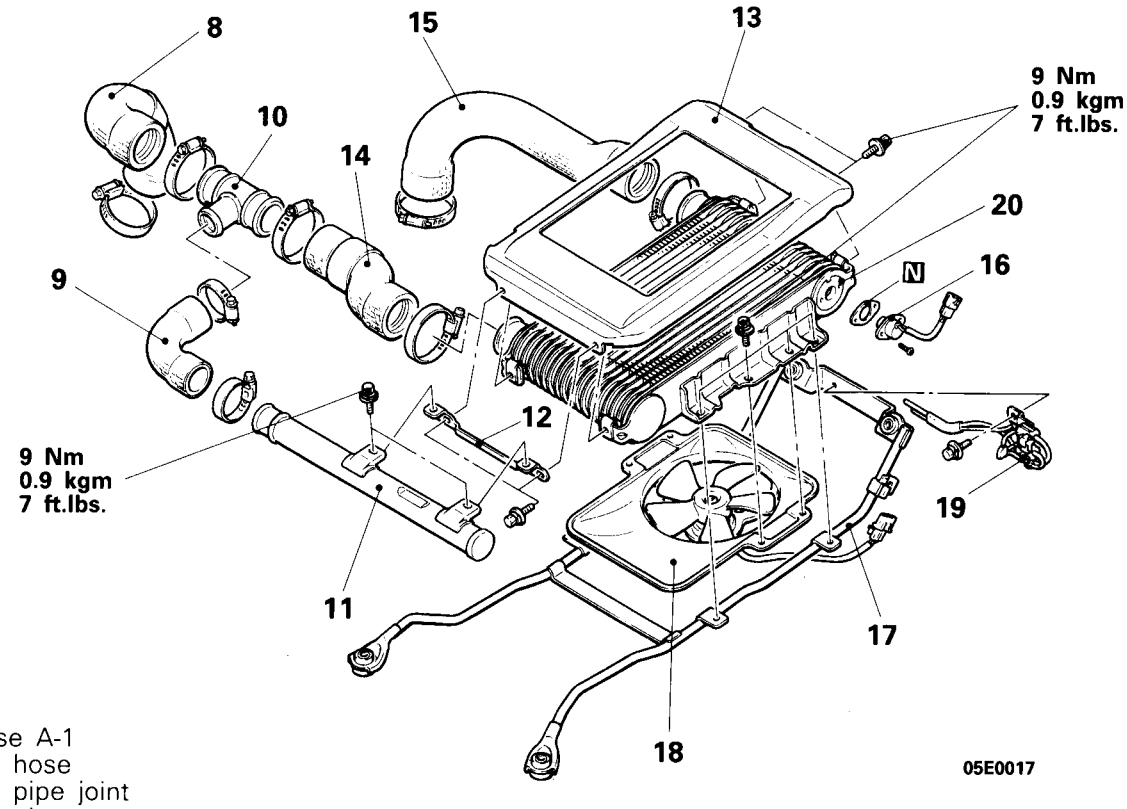
REMOVAL AND INSTALLATION

E15HA--

Removal steps

1. Air temperature switch connector
2. Intercooler fan motor connector
3. EGR solenoid valve connector <Vehicles with EGR system>
4. Vacuum hose connection <Vehicles with EGR system>
5. Air hose B connection (Intake manifold side)
6. Air hose A-1 connection (Turbocharger side)
7. Intercooler and bracket assembly



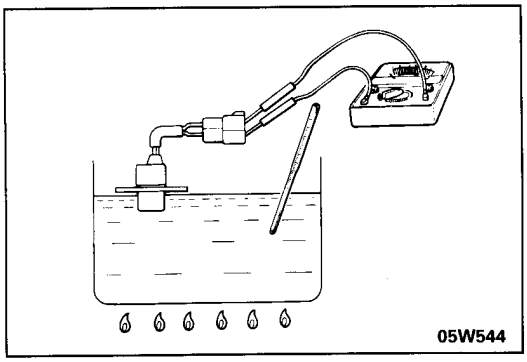


8. Air hose A-1
9. Blanch hose
10. Blanch pipe joint
11. Blanch pipe
12. Blanch pipe bracket
13. Intercooler cover
14. Air hose A-2
15. Air hose B
16. Air temperature switch
17. Intercooler bracket
18. Fan and motor assembly
19. EGR solenoid valve <Vehicles with EGR system>
20. Intercooler

INSPECTION

E15HCAC

- Check the intercooler fins for bending damage or foreign matter.
- Check the intercooler hoses for cracking, damage or wear.



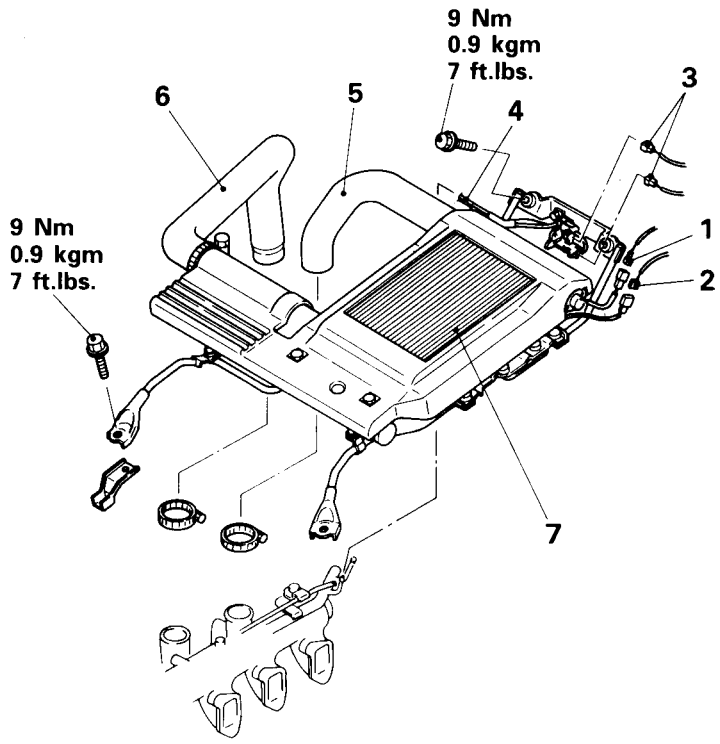
CHECKING AIR TEMPERATURE SWITCH

(1) Immerse the air temperature switch in the hot water shown in the figure.
(2) When changine the water temperature, check for continuity between the terminals with the circuit tester.

50±5°C (122±9°F) or less	Continuity
60±3°C (140±5°F) or more	No continuity

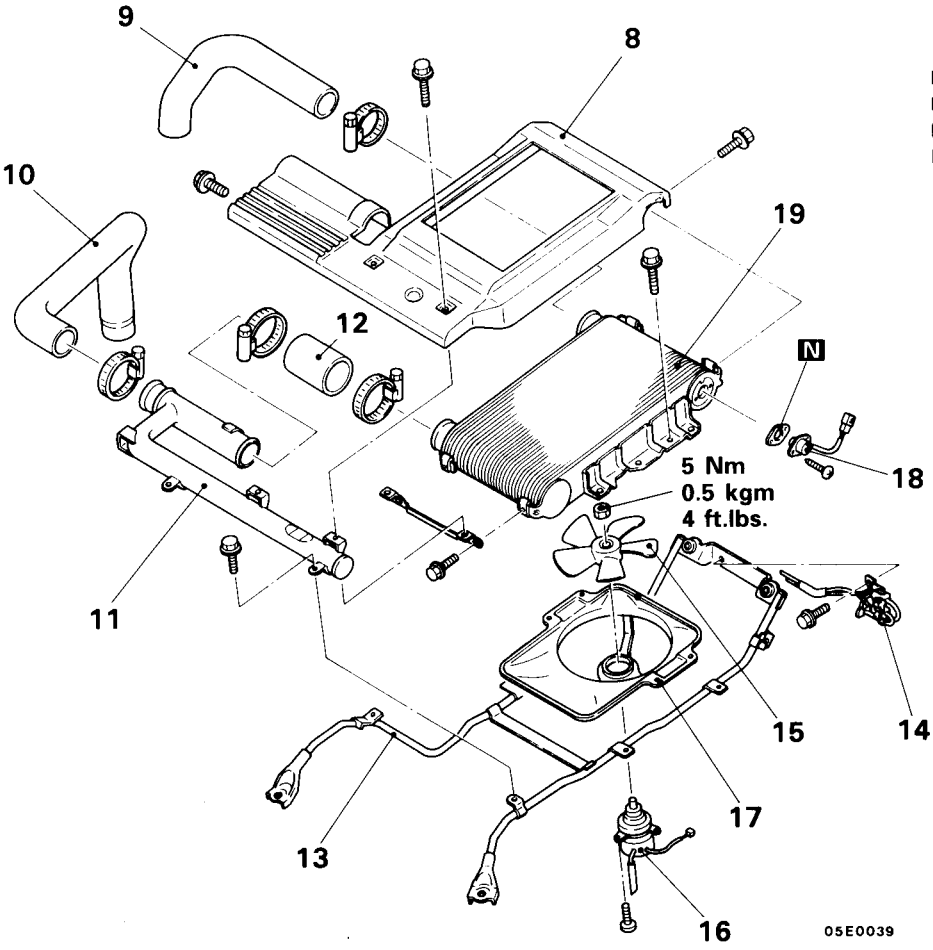
INTERCOOLER <4M40>

REMOVAL AND INSTALLATION

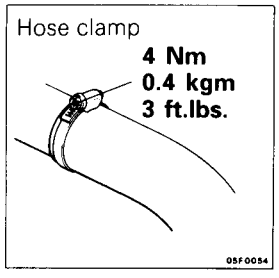


Removal steps

1. Air temperature switch connector
2. Intercooler fan motor connector
3. EGR solenoid valve connector
4. Vacuum hose
5. Air hose A connection (Intake manifold side)
6. Air hose B connection (Turbocharger side)
7. Intercooler and bracket assembly



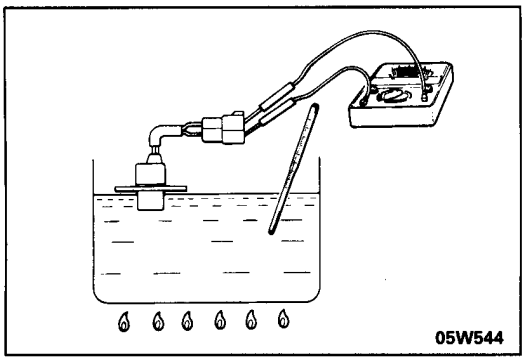
8. Intercooler cover
◆◆ 9. Air hose A
◆◆ 10. Air hose B
◆◆ 11. Branch pipe
◆◆ 12. Branch hose
13. Intercooler bracket
14. EGR solenoid valve
15. Fan
16. Fan motor
17. Fan shroud
18. Air temperature switch
19. Intercooler



INSPECTION

E15HCAC

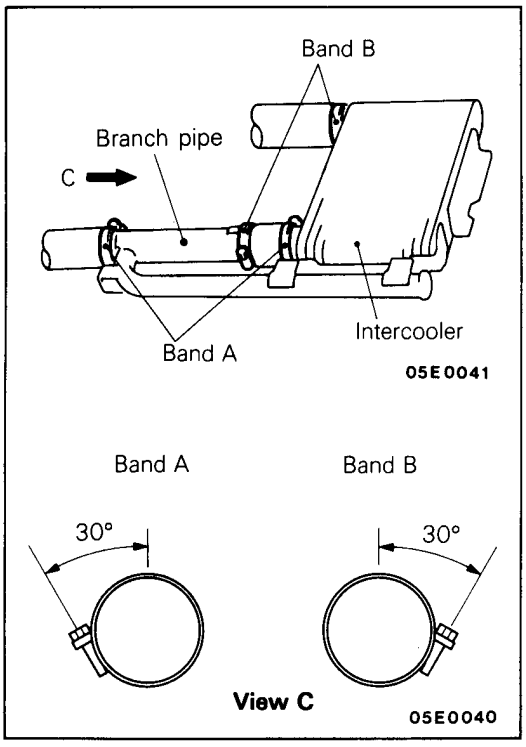
- Check the intercooler fins for bending damage or foreign matter.
- Check the intercooler hoses for cracking, damage or wear.



AIR TEMPERATURE SWITCH

(1) Immerse the air temperature switch in the hot water shown in the figure.
(2) When changine the water temperature, check for continuity between the terminals with the circuit tester.

50 ± 5°C or less	No continuity
60 ± 3°C or more	Continuity



SERVICE POINTS OF INSTALLATION

12.INSTALLATION OF BRANCH HOSE/11. BRANCH PIPE/10. AIR HOSE B/9. AIR HOSE A

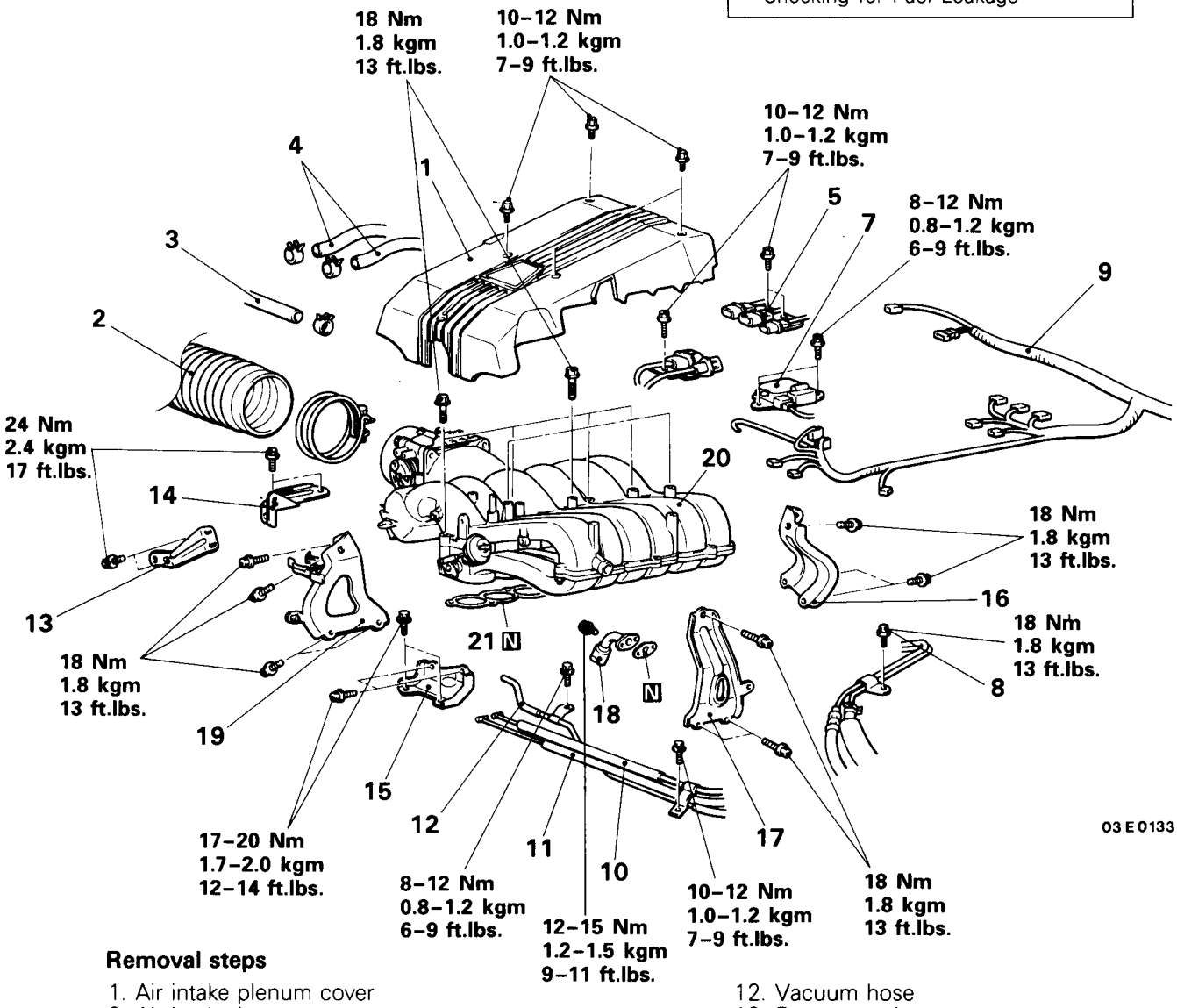
Install the hose bands so that they are at the indicated positions.

INTAKE MANIFOLD <6G74>

REMOVAL AND INSTALLATION

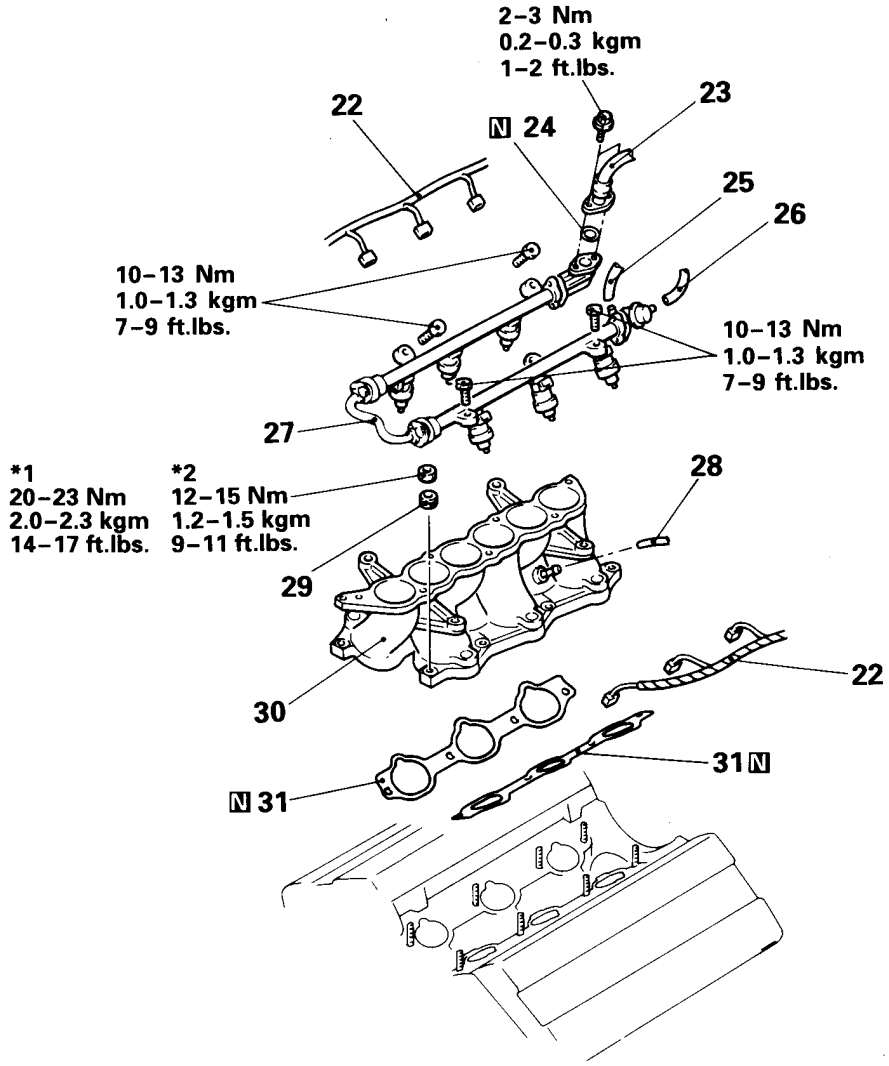
Pre-removal Operation
- Release of Residual Pressure from High Pressure Hose (Refer to GROUP 13 – Service Adjustment Procedure.)
- Draining of Engine Coolant (Refer to GROUP 14 – Coolant Replacement.)

Post-installation Operation
- Filling of Engine Coolant (Refer to GROUP 14 – Coolant Replacement.)
- Adjustment of Accelerator Cable (Refer to GROUP 13 – Service Adjustment Procedures.)
- Adjustment of Throttle Cable (Refer to GROUP 23 – Service Adjustment Procedures.)
- Checking for Fuel Leakage



Removal steps

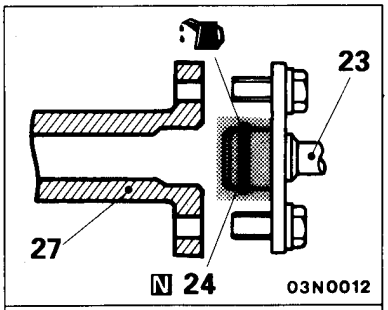
1. Air intake plenum cover
2. Air intake hose
3. Brake booster vacuum hose connection
4. Water hose connection
5. Connector bracket A
6. Connector bracket B
7. Power transistor
8. Fuel hose clamp mounting bolt
9. Engine control harness
10. Accelerator cable connection
11. Cruise control cable connection
12. Vacuum hose
13. Power steering pump stay
14. Accessory mount stay
15. Water outlet fitting bracket
16. Air intake plenum stay (rear)
17. Air intake plenum stay (LH)
18. EGR pipe
19. Air intake plenum stay (RH)
20. Air intake plenum
◆◆ 21. Air intake plenum gasket



03E0123

22. Connection of injector harness
◆◆ 23. Connection for high-pressure fuel hose
24. O-ring
25. Connection for fuel return hose
26. Connection for vacuum hose
27. Delivery pipe (with injector)
28. PCV hose
◆◆ 29. Cone disc spring
◆◆ 30. Intake manifold
◆◆ 31. Intake manifold gasket

NOTE
*1: Green cone disc spring
*2: Black cone disc spring

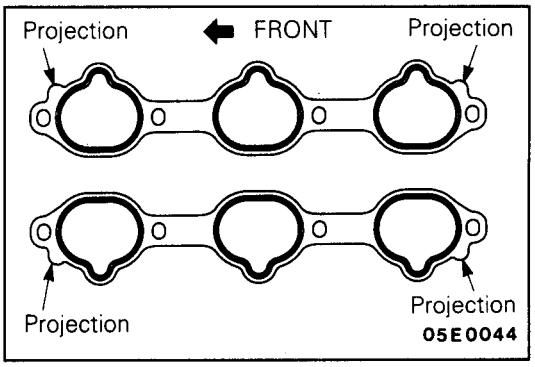


Engine oil

INSPECTION M15MCAN

Check the following points; replace the part if a problem is found.

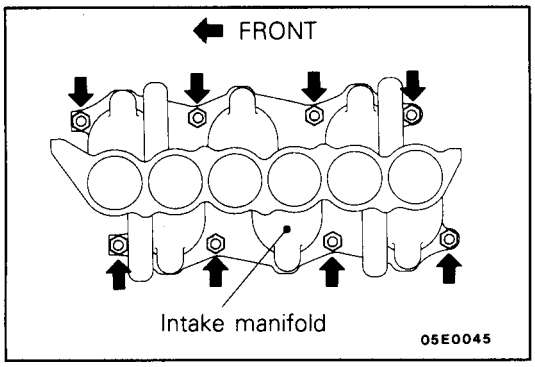
(1) Damage or cracking of any part.
(2) Clogging of the negative pressure (vacuum) outlet port, or clogging of the water or gas passages.



SERVICE POINTS OF INSTALLATION

31. INSTALLATION OF INTAKE MANIFOLD GASKET

Install the gaskets so that the projections face in the directions shown in the illustration.



30. INSTALLATION OF INTAKE MANIFOLD / 29. CONE DISC SPRING

Tighten the intake manifold mounting nuts one bank after the other by the following procedure.

<For green cone disc spring>

(1) Tighten the nuts in the right bank to 7 Nm (0.7 kgm, 5 ft.lbs.).
(2) Tighten the nuts in the left bank to 20 to 23 Nm (2.0 to 2.3 kgm, 14 to 17 ft.lbs.)
(3) Tighten the nuts in the right bank to 20 to 23 Nm (2.0 to 2.3 kgm, 14 to 17 ft.lbs.)
(4) Repeat steps (2) and (3) one more time respectively.

<For black cone disc spring>

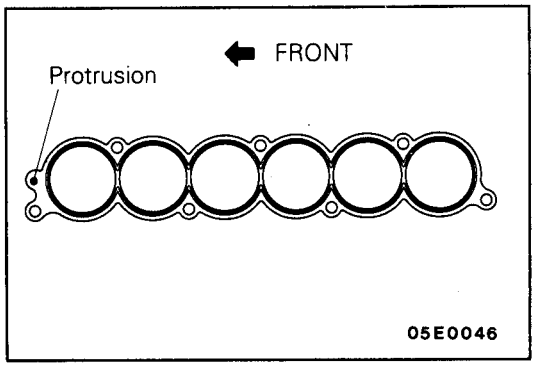
(1) Tighten the nuts in the right bank to 3 to 5 Nm (0.3 to 0.5 kgm, 2.2 to 3.6 ft.lbs.).
(2) Tighten the nuts in the left bank to 12 to 15 Nm (1.2 to 1.5 kgm, 9 to 11 ft.lbs.).
(3) Tighten the nuts in the right bank to 12 to 15 Nm (1.2 to 1.5 kgm, 9 to 11 ft.lbs.).
(4) Repeat steps (2) and (3) one more time respectively.

23. INSTALLATION OF HIGH-PRESSURE FUEL HOSE

(1) Apply a little amount of new engine oil to the O-ring.

Caution
Be sure to prevent the engine oil from entering into the delivery pipe.

(2) Insert the hose, being careful not to damage the O-ring, and tighten securely.



21. INSTALLATION OF AIR INTAKE PLENUM GASKET

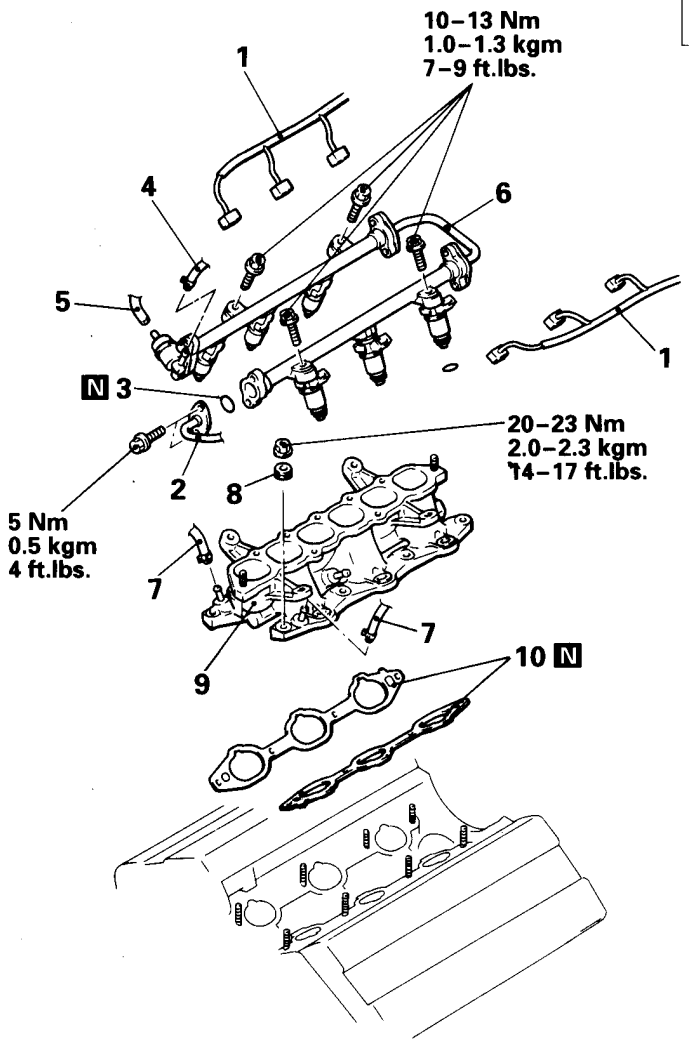
Install with gasket protrusions in the position illustrated.

INTAKE MANIFOLD <6G72 – 24 VALVE>

REMOVAL AND INSTALLATION

Pre-removal Operation
- Release of Residual Pressure from High Pressure Hose (Refer to GROUP 13 – Service Adjustment Procedure.)
- Draining of Engine Coolant (Refer to GROUP 14 – Coolant Replacement.)
- Removal of Air Intake Plenum

Post-installation Operation
- Installation of Air Intake Plenum
- Filing of Engine Coolant (Refer to GROUP 14 – Coolant Replacement.)
- Adjustment of Accelerator Cable (Refer to GROUP 13 – Service Adjustment Procedures.)
- Adjustment of Throttle Cable (Refer to GROUP 23 – Service Adjustment Procedures.)
- Checking for Fuel Leakage



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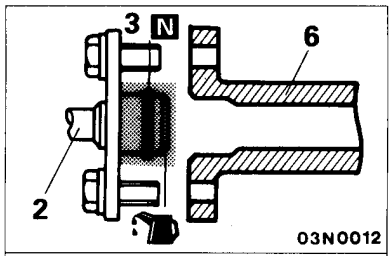


Engine oil

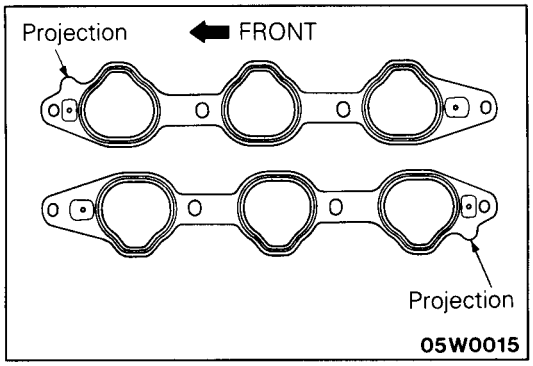
1. Connection of injector harness
2. Connection for high-pressure fuel hose
3. O-ring
4. Connection for fuel return hose
5. Connection for vacuum hose
6. Delivery pipe (with injector)
7. Connection for water hose
8. Cone disc spring
9. Intake manifold
10. Intake manifold gasket

INSPECTION

M15MCAN

Check the following points; replace the part if a problem is found.

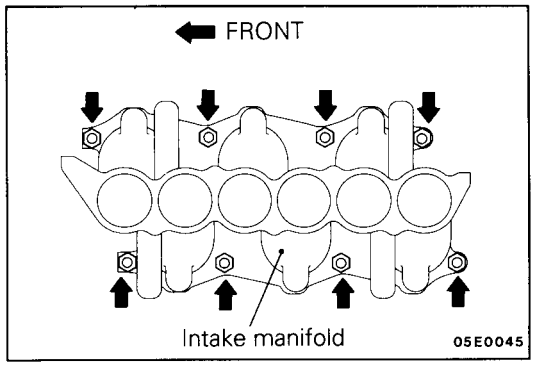
(1) Damage or cracking of any part.
(2) Clogging of the negative pressure (vacuum) outlet port, or clogging of the water or gas passages.



SERVICE POINTS OF INSTALLATION

10. INSTALLATION OF INTAKE MANIFOLD GASKET

Install the gaskets so that the projections face in the directions shown in the illustration.



9. INSTALLATION OF INTAKE MANIFOLD / 8. CONE DISC SPRING

Tighten the intake manifold mounting nuts one bank after the other by the following procedure.

(1) Tighten the nuts in the right bank to 7 Nm (0.7 kgm, 5 ft.lbs.).
(2) Tighten the nuts in the left bank to 20 to 23 Nm (2.0 to 2.3 kgm, 14 to 17 ft.lbs.).
(3) Tighten the nuts in the right bank to 20 to 23 Nm (2.0 to 2.3 kgm, 14 to 17 ft.lbs.)
(4) Repeat steps (2) and (3) one more time respectively.

2. INSTALLATION OF HIGH-PRESSURE FUEL HOSE

(1) Apply a little amount of new engine oil to the O-ring.

Caution
Be sure to prevent the engine oil from entering into the delivery pipe.

(2) Insert the hose, being careful not to damage the O-ring, and tighten securely.

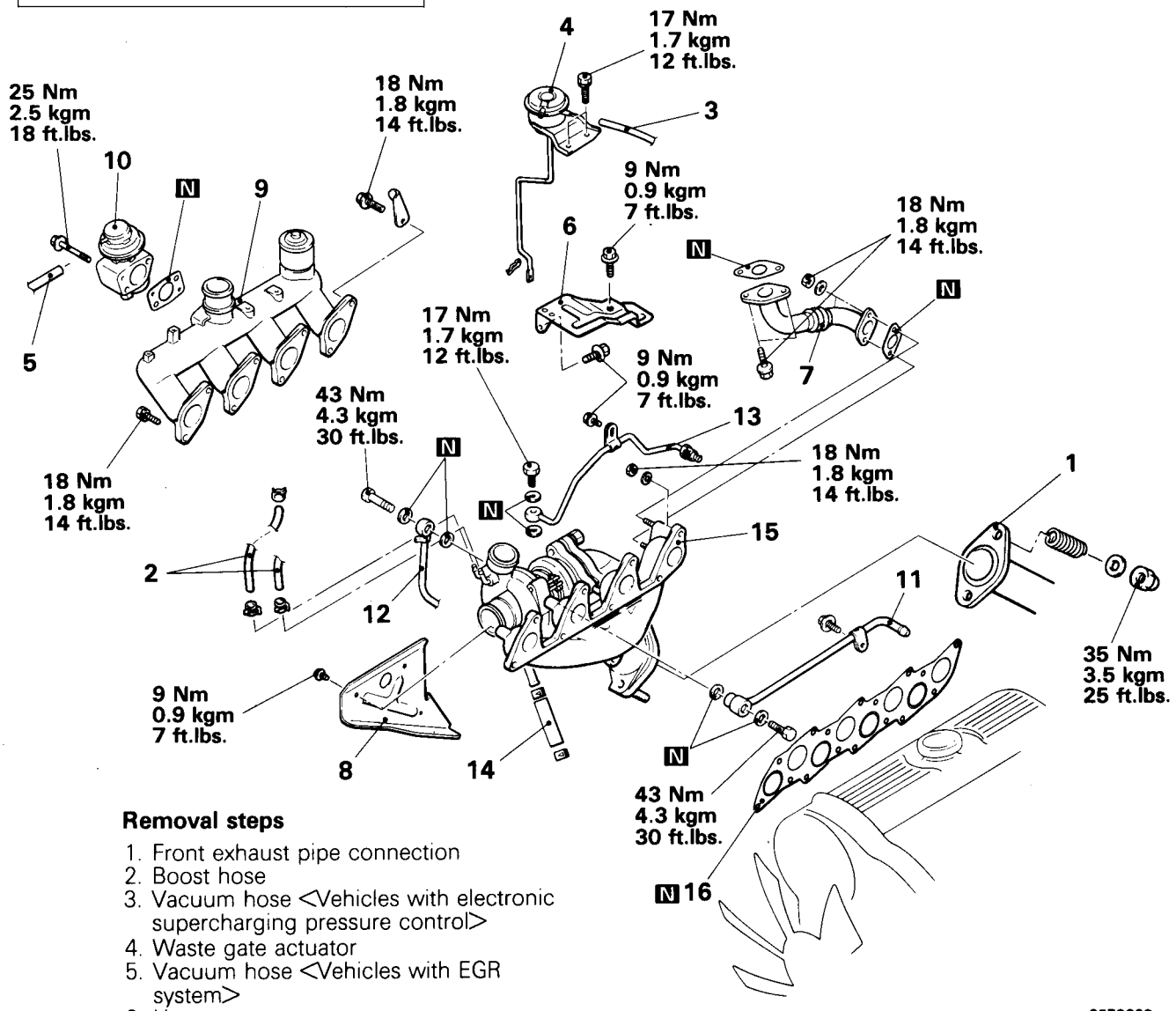
NOTES

TURBOCHARGER AND EXHAUST MANIFOLD <4D56>

REMOVAL AND INSTALLATION

E15L8AD

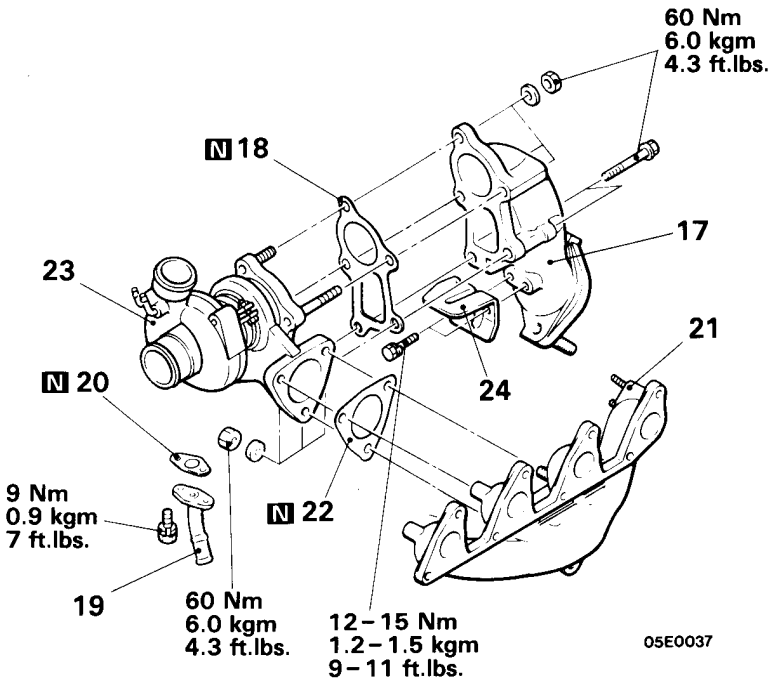
Pre-removal and Post-installation Operation
- Removal and installation of the air cleaner cover and air intake hose
- Removal and installation of the intercooler (Refer to P.15-4.)
- Removal and installation of the brake master cylinder heat protector <R.H. drive Vehicles>
- Draining and Supplying of the Engine Coolant <Vehicles with Water Cooled Turbocharger>

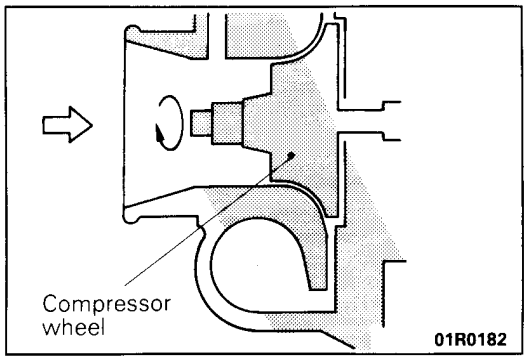


Removal steps

1. Front exhaust pipe connection
2. Boost hose
3. Vacuum hose <Vehicles with electronic supercharging pressure control>
4. Waste gate actuator
5. Vacuum hose <Vehicles with EGR system>
6. Heat protector
7. EGR pipe <Vehicles with EGR system>
8. Heat protector
9. Intake manifold
10. EGR valve
11. Water pipe A
12. Water pipe B connection } <Vehicles with water cooled turbocharger>
13. Oil pipe
14. Oil return hose connection
15. Exhaust manifold and turbocharger assembly
16. Intake and exhaust manifold gasket

17. Exhaust fitting
18. Exhaust fitting gasket
19. Oil return pipe
20. Oil return pipe gasket
21. Exhaust manifold
22. Turbocharger gasket
23. Turbocharger assembly
24. Heat protector





INSPECTION E15LCAF

TURBOCHARGER ASSEMBLY CHECK

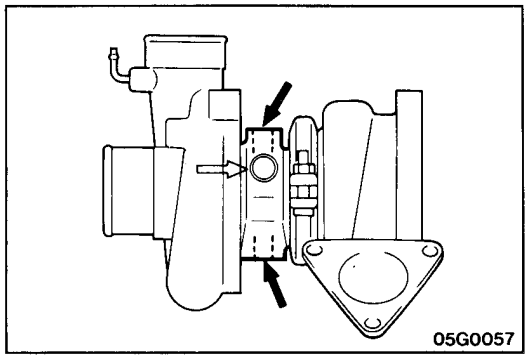
- Visually check the turbine wheel and the compressor wheel for cracking or other damage.
- Check whether the turbine wheel and the compressor wheel can be easily turned by hand.
- Check for oil leakage from the turbocharger assembly.
- Check whether or not the waste gate valve remains open. If any problem is found, replace the part after disassembly.

OIL PIPE AND OIL-RETURN PIPE CHECK

Check the oil pipe and oil-return pipe for clogging, bending, or other damage.
If there is clogging, clean it.

EXHAUST MANIFOLD CHECK

- Damage or cracking of any part.



SERVICE POINT OF INSTALLATION E15LDAD

23.INSTALLATION OF TURBOCHARGER ASSEMBLY

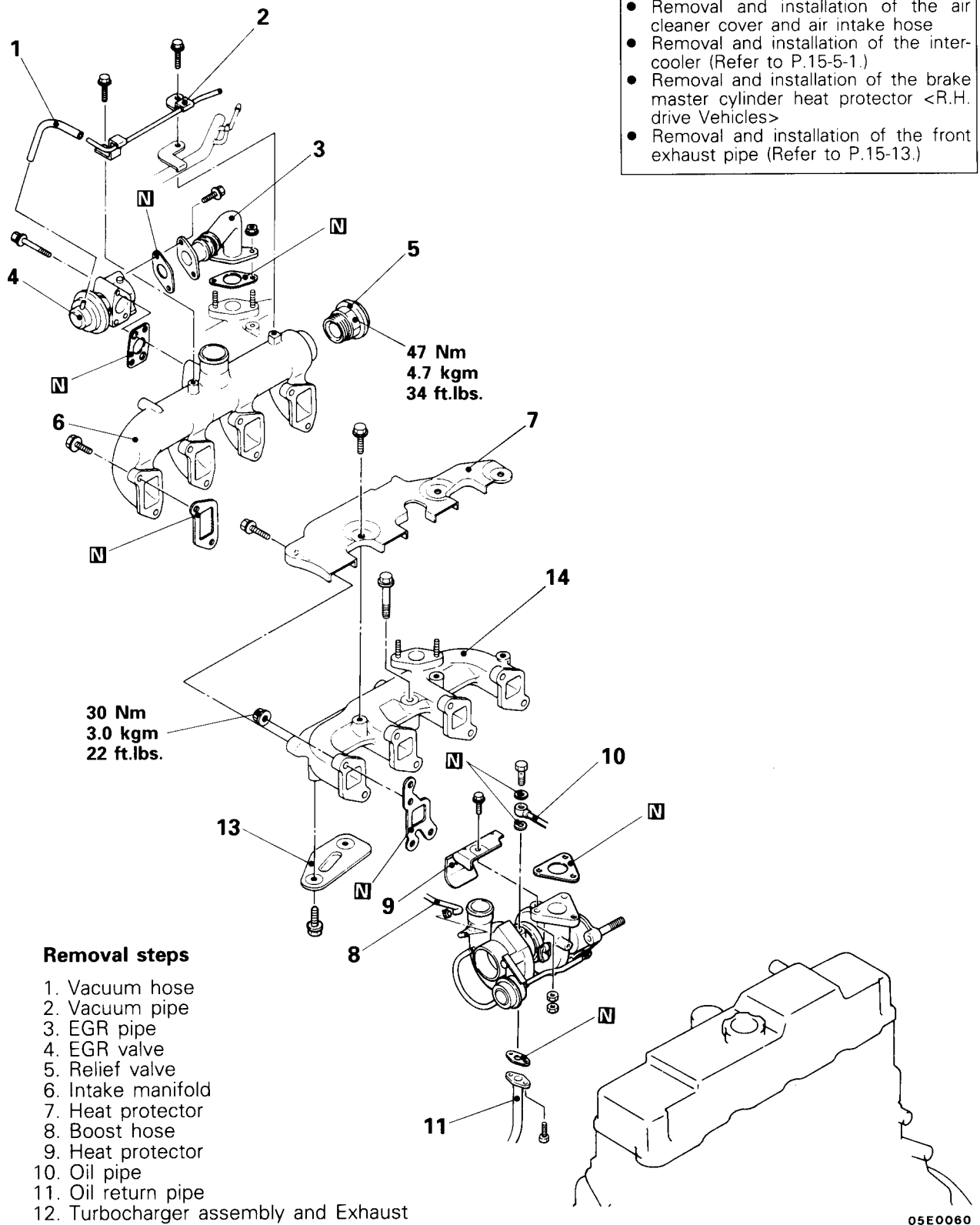
(1) Clean the alignment surfaces shown in the illustration.
(2) Supply clean engine oil from the oil pipe mounting hole of the turbocharger assembly.

Caution
When cleaning, take care that no foreign material gets into the engine coolant or oil passages hole.

TURBOCHARGER AND EXHAUST MANIFOLD <4M40>

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation
- Removal and installation of the air cleaner cover and air intake hose
- Removal and installation of the inter-cooler (Refer to P.15-5-1.)
- Removal and installation of the brake master cylinder heat protector <R.H. drive Vehicles>
- Removal and installation of the front exhaust pipe (Refer to P.15-13.)

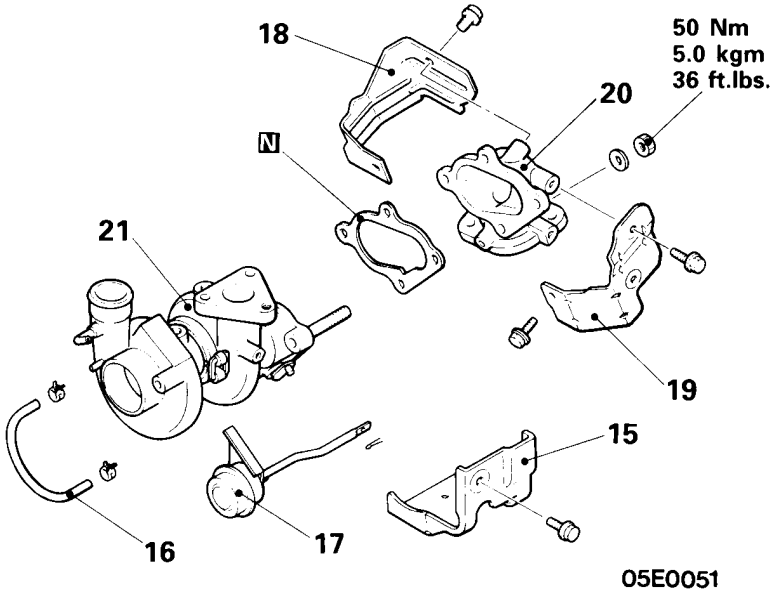


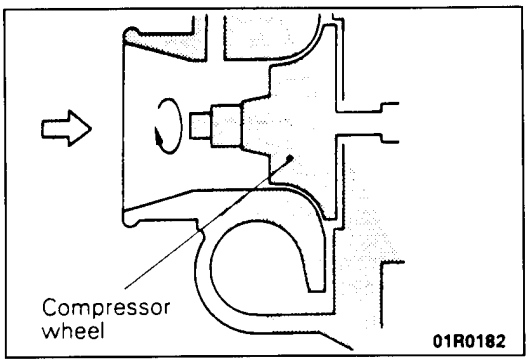
Removal steps

1. Vacuum hose
2. Vacuum pipe
3. EGR pipe
4. EGR valve
5. Relief valve
6. Intake manifold
7. Heat protector
8. Boost hose
9. Heat protector
10. Oil pipe
11. Oil return pipe
12. Turbocharger assembly and Exhaust fitting
13. Heat protector
14. Exhaust manifold

ADDED

15. Heat protector
16. Boost hose
17. Waste gate actuator
18. Heat protector
19. Heat protector
20. Exhaust fitting
◆◆ 21. Turbocharger assembly





INSPECTION

TURBOCHARGER ASSEMBLY CHECK

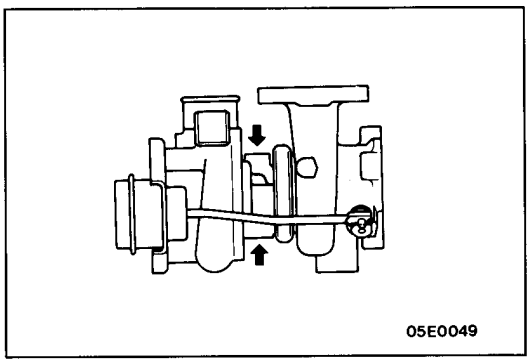
- Visually check the turbine wheel and the compressor wheel for cracking or other damage.
- Check whether the turbine wheel and the compressor wheel can be easily turned by hand.
- Check for oil leakage from the turbocharger assembly.
- Check whether or not the waste gate valve remains open. If any problem is found, replace the part after disassembly.

OIL PIPE AND OIL-RETURN PIPE CHECK

Check the oil pipe and oil-return pipe for clogging, bending or other damage.
If there is clogging, clean it.

EXHAUST MANIFOLD CHECK

- Damage or cracking of any part.



SERVICE POINT OF INSTALLATION E15LDAD

21. INSTALLATION OF TURBOCHARGER ASSEMBLY

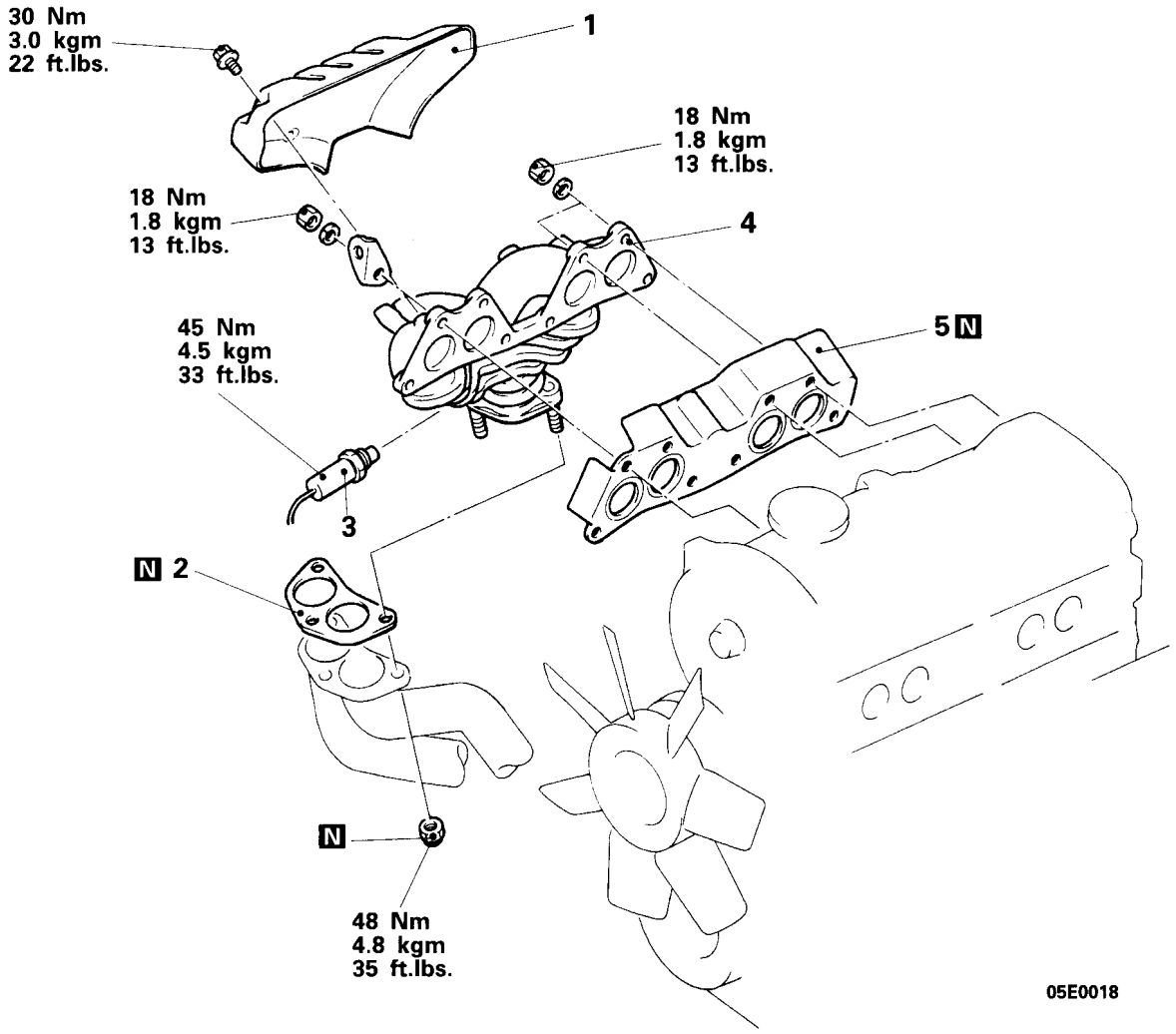
(1) Clean the alignment surfaces shown in the illustration.
(2) Supply clean engine oil from the oil pipe mounting hole of the turbocharger assembly.

Caution
When cleaning, take care that no foreign material gets into the engine coolant or oil passages hole.

EXHAUST MANIFOLD <4G64>

REMOVAL AND INSTALLATION

E15NA-1



Removal steps

1. Exhaust manifold cover
2. Gasket
3. Oxygen sensor
4. Exhaust maniofld
5. Exhaust manifold gasket

INSPECTION

E15NCAE1

EXHAUST MANIFOLE

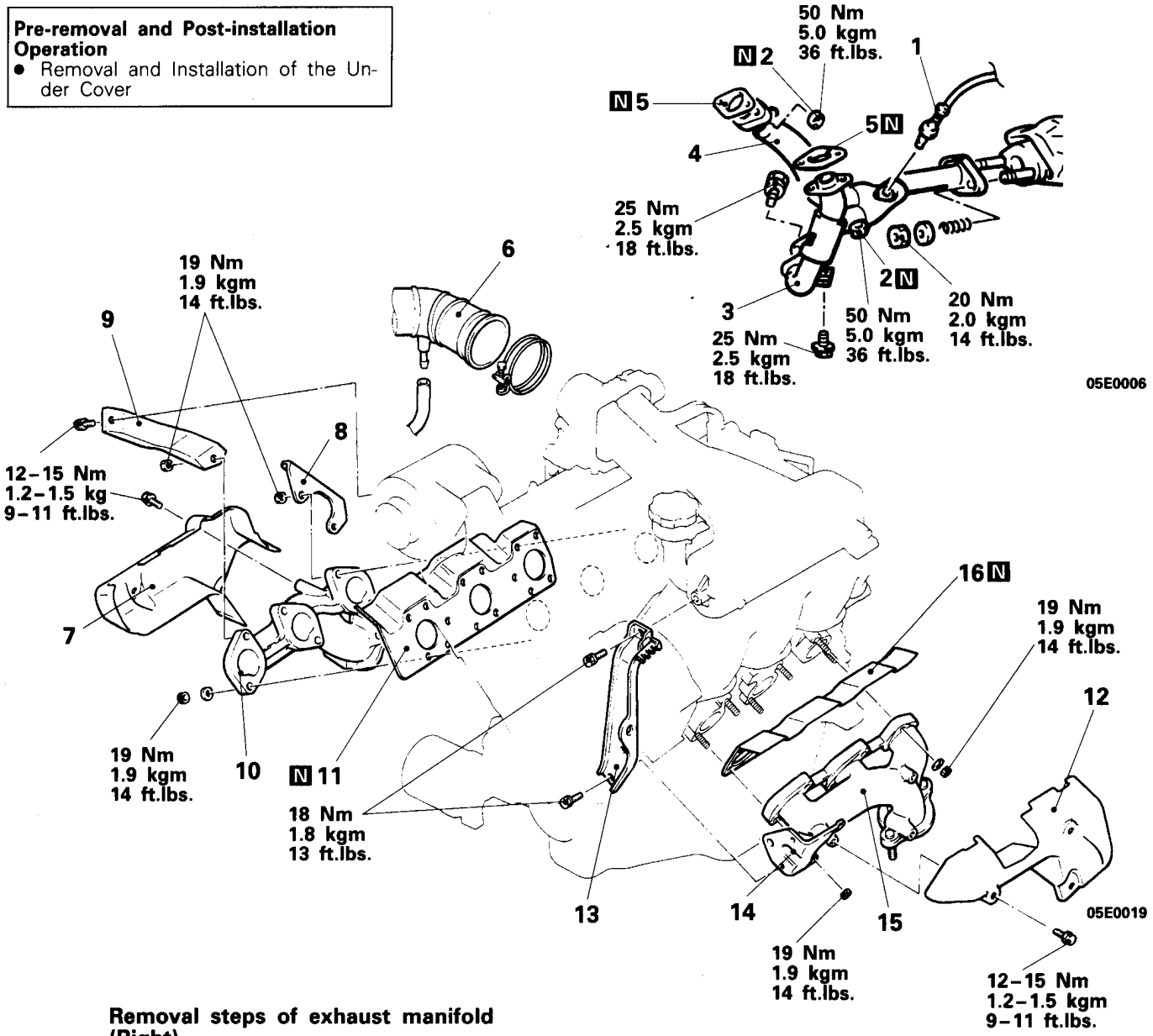
- Damage or cracking of any part.

EXHAUST MANIFOLD <6G72 – 12 VALVE>

REMOVAL AND INSTALLATION

E15NA-2

Pre-removal and Post-installation Operation
- Removal and Installation of the Under Cover



Removal steps of exhaust manifold (Right)
1. Oxygen sensor
2. Self-locking nut
3. Front exhaust pipe (L.H.)
4. Front exhaust pipe (R.H.)
5. Gasket
6. Air duct
7. Heat protector
8. Engine hanger
9. Alternator stay
10. Exhaust manifold
11. Exhaust manifold gasket

Removal steps of exhaust manifold (Left)
3. Front exhaust pipe (L.H.)
5. Gasket
12. Heat protector
13. Air intake plenum stay (front)
14. Bracket
15. Exhaust manifold
16. Exhaust manifold gasket

INSPECTION

E15NCAE2

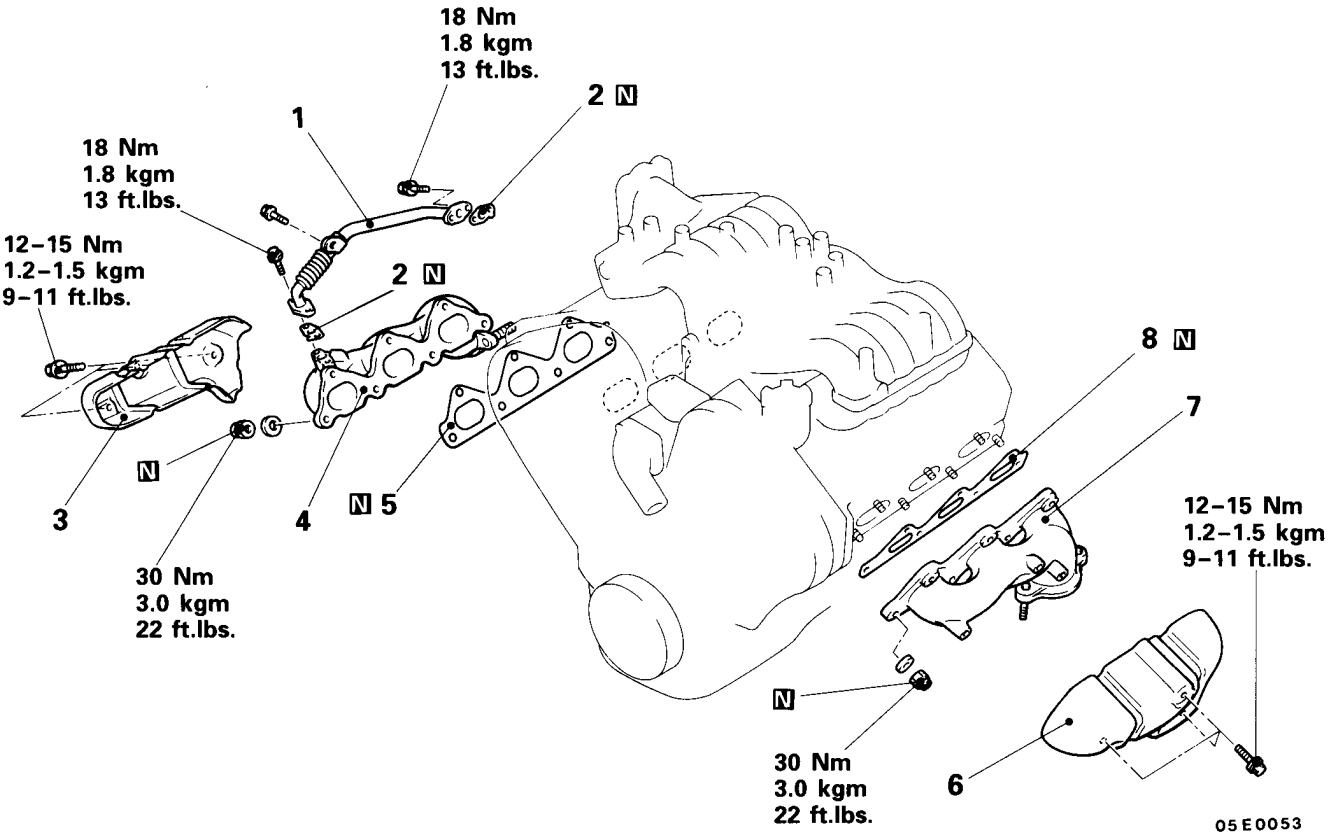
EXHAUST MANIFOLD

- Damage or cracking of any part.

EXHAUST MANIFOLD <6G74>

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation
- Removal and Installation of front exhaust pipe (Refer to P.15-12)



Removal steps of exhaust manifold (Right)
- Air cleaner cover and intake hose

1. EGR pipe
2. Gasket
3. Heat protector
4. Exhaust manifold
5. Exhaust manifold gasket

Removal steps of exhaust manifold (Left)
- Battery and battery tray

6. Heat protector
7. Exhaust manifold
8. Exhaust manifold gasket

INSPECTION

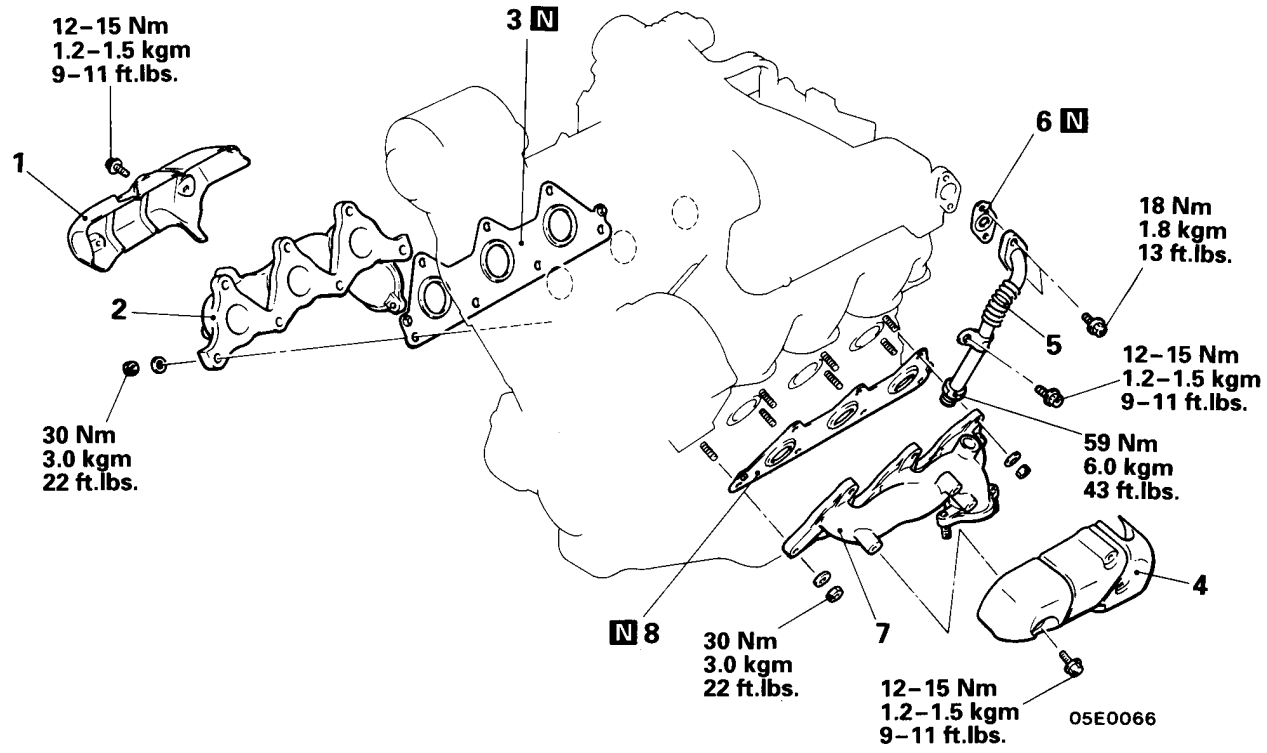
EXHAUST MANIFOLD

- Damage or cracking of any part.

EXHAUST MANIFOLD <6G72 – 24 VALVE>

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation
- Removal and Installation of Front Exhaust Pipe (Refer to P.15-12).



Removal steps of exhaust manifold (Right)
- Air duct and air cleaner cover
1. Heat protector (R.H.)
2. Exhaust manifold (R.H.)
3. Gasket

Removal steps of exhaust manifold (Left)
- Battery and battery tray
4. Heat protector (L.H.)
5. EGR pipe
6. Gasket
7. Exhaust manifold (L.H.)
8. Gasket

INSPECTION

EXHAUST MANIFOLD

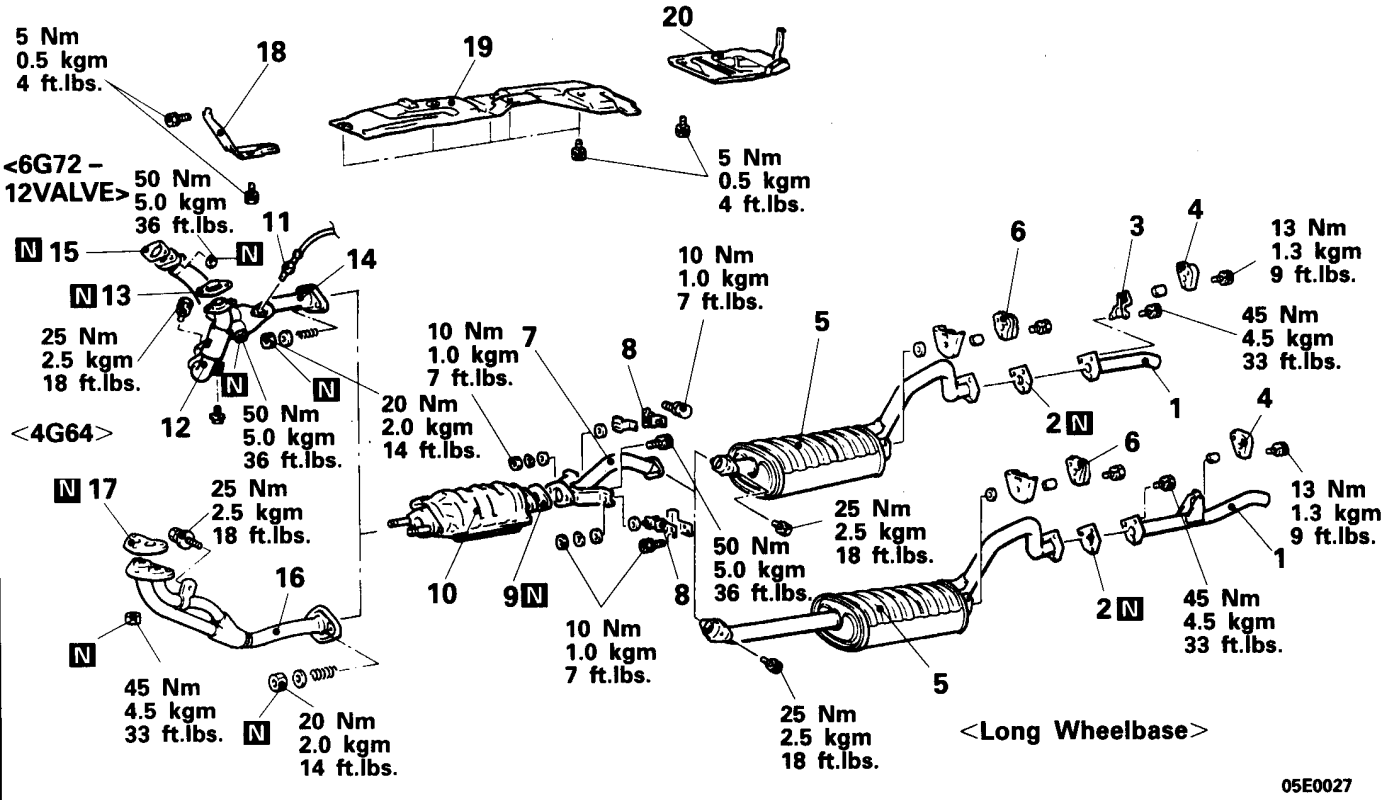
- Damage or cracking of any part.

EXHAUST PIPE, MUFFLER AND CATALYTIC CONVERTER <4G64, 6G72 – 12 VALVE>

REMOVAL AND INSTALLATION

E15RA--

Pre-removal and Post-installation Operation
- Removal and installation of the under cover



05E0027

Removal steps
1. Tail pipe
2. Gasket
3. Hanger bracket
4. Hanger
5. Main muffler
6. Hanger
7. Center exhaust pipe
8. Suspender
9. Gasket
10. Catalytic converter
11. Oxygen sensor
12. Front exhaust pipe (L.H.) } <6G72>
13. Gasket
14. Front exhaust pipe (R.H.) }
15. Gasket
16. Front exhaust pipe } <4G64>
17. Gasket }
18. Heat protector
19. Front panel heat protector
20. Rear heater heat protector <Vehicles with rear heater>

INSPECTION

E15RCAI

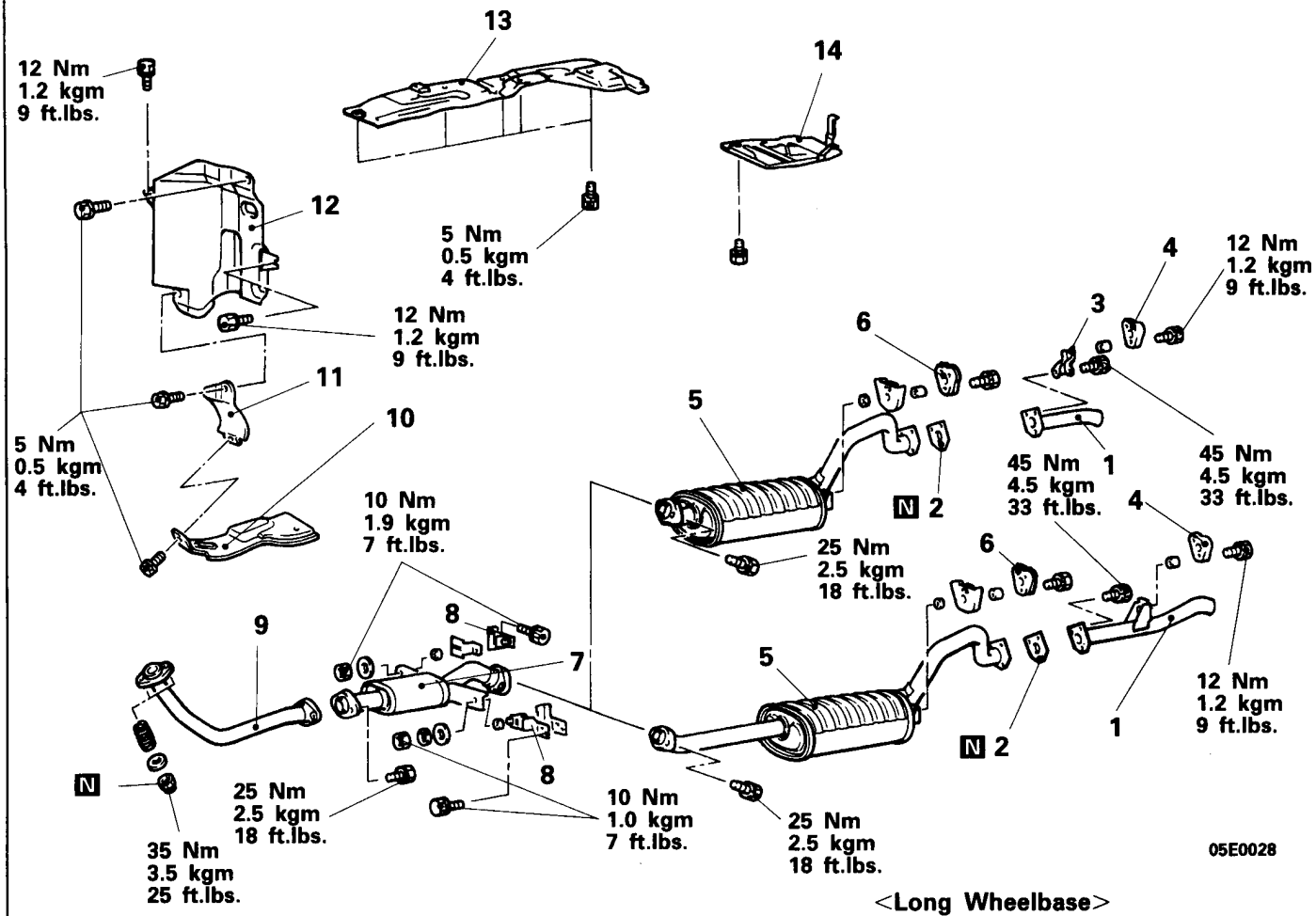
- Check the mufflers and pipes for corrosion or damage.
- Check the rubber hangers and rubber suspenders for deterioration or damage.
- Check for gas leakage from mufflers and pipes.

EXHAUST PIPE AND MUFFLER <4D56>

REMOVAL AND INSTALLATION

E15RA--

Pre-removal and Post-installation Operation
- Removal and installation of the brake master cylinder heat protector <R.H. drive vehicles>



<Long Wheelbase>

Removal steps

1. Tail pipe
2. Gasket
3. Hanger bracket
4. Hanger
5. Main muffler
6. Hanger
7. Pre muffler
8. Suspender
9. Front exhaust pipe
10. Dash panel heat protector
11. Heat protector
12. Dash panel heat protector upper
13. Front panel heat protector
14. Rear heater heat protector <Vehicles with Rear heater>

INSPECTION

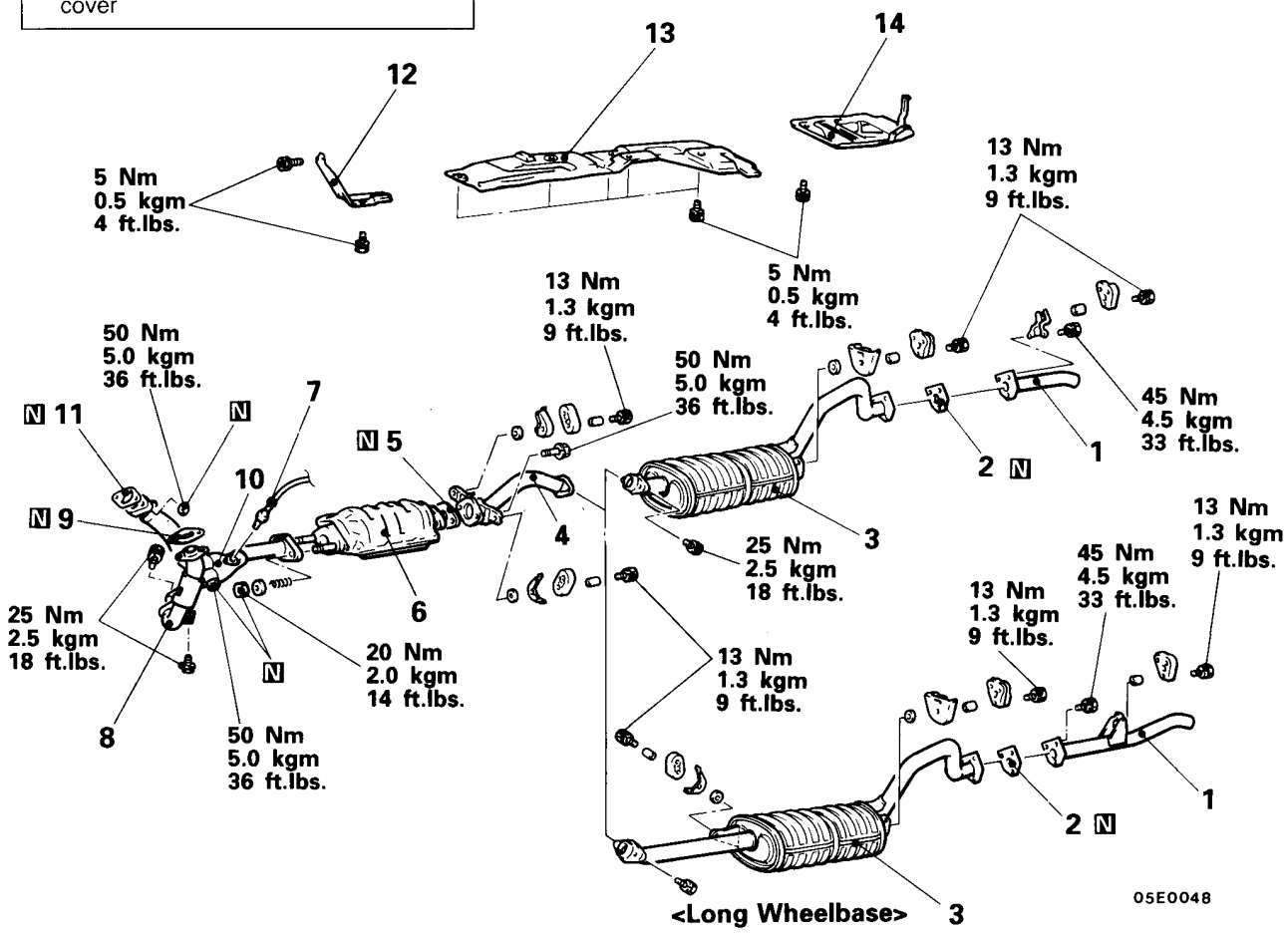
E15RCAI

- Check the mufflers and pipes for corrosion or damage.
- Check the rubber hangers and rubber suspenders for deterioration or damage.
- Check for gas leakage from mufflers and pipes.

EXHAUST PIPE, MUFFLER AND CATALYTIC CONVERTER <6G72 – 24 VALVE, 6G74>

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation
- Removal and installation of the under cover



Removal steps

1. Tail pipe
2. Gasket
3. Main muffler
4. Center exhaust pipe
5. Gasket
6. Catalytic converter
7. Oxygen sensor
8. Front exhaust pipe (L.H.)
9. Gasket
10. Front exhaust pipe (R.H.)
11. Gasket
12. Heat protector
13. Front panel heat protector
14. Rear heater heat protector <Vehicles with rear heater>

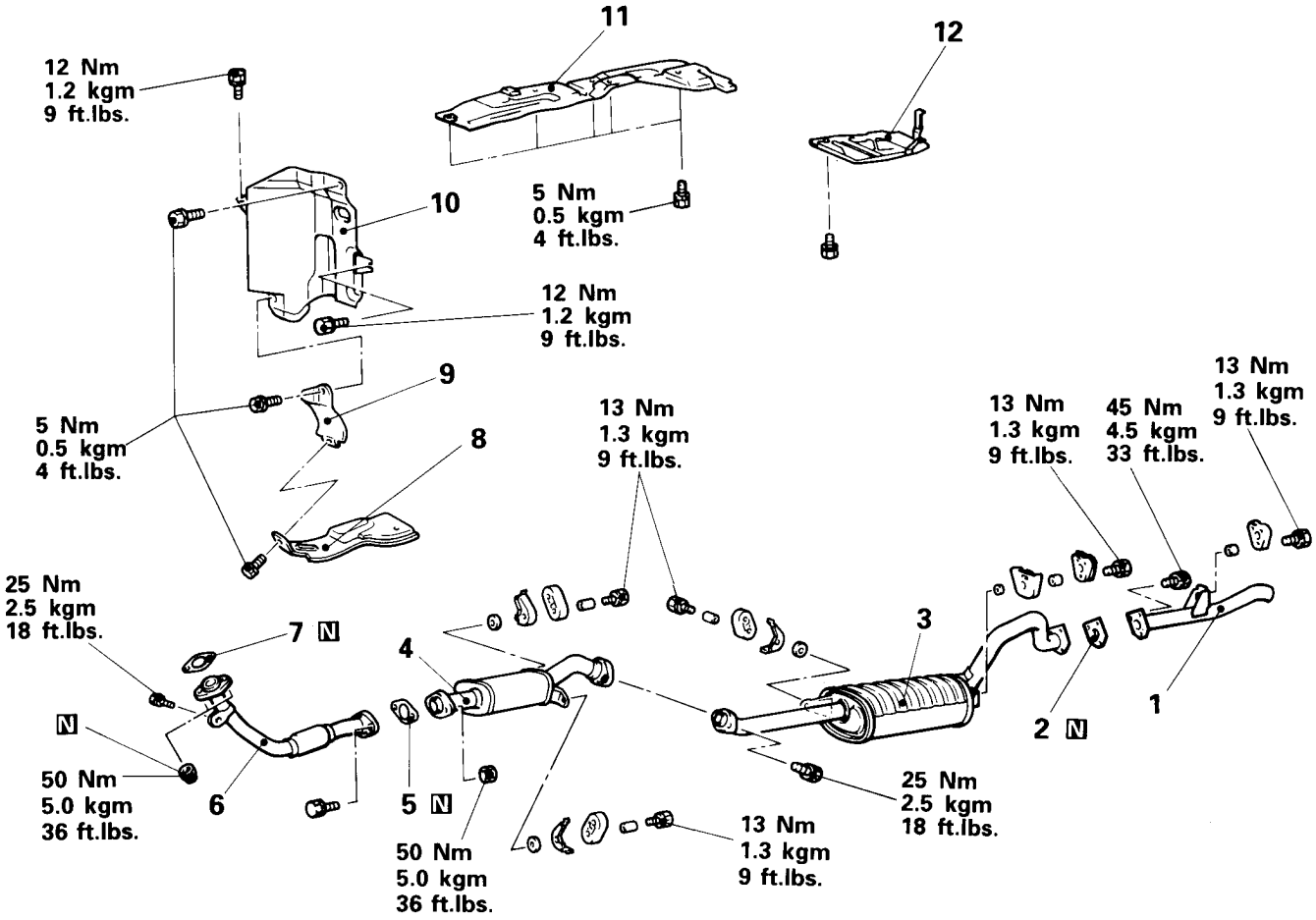
INSPECTION

- Check the mufflers and pipes for corrosion or damage.
- Check the rubber hangers and rubber suspenders for deterioration or damage.
- Check for gas leakage from mufflers and pipes.

EXHAUST PIPE AND MUFFLER <4M40>

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation
- Removal and installation of the brake master cylinder heat protector <R.H. drive vehicles>



05E0047

Removal steps

1. Tail pipe
2. Gasket
3. Main muffler
4. Pre muffler
5. Gasket
6. Front exhaust pipe
7. Gasket
8. Dash panel heat protector
9. Heat protector
10. Dash panel heat protector upper
11. Front panel heat protector
12. Rear heater heat protector <Vehicles with rear heater>

INSPECTION E15RCAI

- Check the mufflers and pipes for corrosion or damage.
- Check the rubber hangers and rubber suspenders for deterioration or damage.
- Check for gas leakage from mufflers and pipes.