MITSUBISHI MOTORS

SERVICE BULLETIN

GLOBAL AFTER SALES OFFICE, MITSUBISHI MOTORS CORPORATION

PURPOSE : CORRECTION	ISSUE NO. : MSB-10E15_23-501	DATE : 2010-10-20
SUBJECT : CORRECTIONS OF ERRORS IN WORKSHOP MANUALS		<MODEL> (EUR) PAJERO/MONTERO (V80/90) <M/Y> 07–11
GROUP : INTAKE & EXHAUST/AUTOMATIC TRANSMISSION		

1. Description:

There have been some errors in some PAJERO/MONTERO workshop manuals. This Service Bulletin contains the corrections for these errors.

2. Applicable Manuals:

See Attached sheet 1.

There may be some attached sheets not included in this Service Bulletin because they are not applicable to your market. Their sheet numbers are not listed in the above table.

3. Corrected Specifications:

See Attached sheets 2 to 6, 8, 14, 17 and 19.

Attached sheet 1

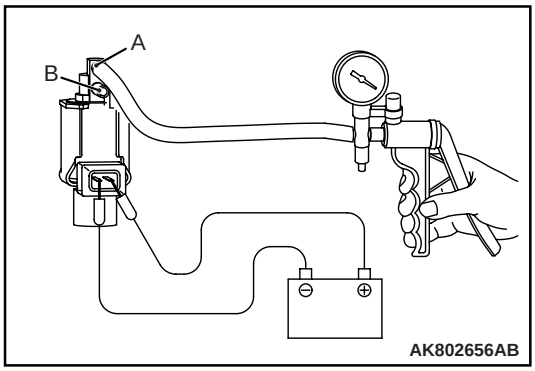
Manual	Pub. No.	Title (Info-ID)	Attached Sheet
2007 PAJERO/MONTERO Workshop Manual CD-ROM	CBKE07E2-CD (English) CBKS07E2-CD (Spanish) CBKF07E2-CD (French) CBKG07E2-CD (German)	Gr.23A: Transmission Control Removal and Installation (M12301100179ENG0000010000)	Attached sheet 14
2008 PAJERO/MONTERO Workshop Manual CD-ROM	CBKE08E1-CD (English) CBKS08E1-CD (Spanish) CBKF08E1-CD (French) CBKG08E1-CD (German)	Gr.15: Inlet Manifold Removal and Installation (M151-00-302-35800-01)	Attached sheet 6
		Gr.15: Inlet Manifold Removal and Installation (M151-00-302-34700-01)	Attached sheet 6
		Gr.23A: Transmission Control Removal and Installation (M231-11-790-29700-01)	Attached sheet 14
2009 PAJERO/MONTERO Workshop Manual CD-ROM	CBKE09E2-CD (English) CBKS09E2-CD (Spanish) CBKF09E2-CD (French) CBKG09E2-CD (German) CBKI09E2-CD (Italian)	Gr.15: Inlet Manifold Removal and Installation (M151-00-303-57700-01)	Attached sheet 8
		Gr.15: Swirl Control Valve Solenoid Check <4M4 without fuel filter switch> (M151-01-090-10800-01)	Attached sheet 2
		Gr.23C: How to Initialise A/T Learning Value (M231-10-430-05700-01)	Attached sheet 19
		Gr.23D: Transmission Disassembly (M233-10-090-01900-01)	Attached sheet 5
2010 PAJERO/MONTERO Workshop Manual CD-ROM	CBKE10E1-CD (English) CBKS10E1-CD (Spanish) CBKF10E1-CD (French) CBKG10E1-CD (German) CBKI10E1-CD (Italian)	Gr.15: Inlet Manifold Removal and Installation (M151-00-303-57700-01)	Attached sheet 8
		Gr.15: Swirl Control Valve Solenoid Check <4M4 without fuel filter switch> (M151-01-090-10800-01)	Attached sheet 2
		Gr.23C: How to Initialise A/T Learning Value (M231-10-430-05700-01)	Attached sheet 19
		Gr.23C: Transmission Control Removal and Installation (M231-11-790-54300-01)	Attached sheet 17
		Gr.23D: Transmission Disassembly (M233-10-090-01900-01)	Attached sheet 5
2011 PAJERO/MONTERO Workshop Manual	CBKE11E1-CD (English) CBKS11E1-CD (Spanish) CBKF11E1-CD (French) CBKG11E1-CD (German) CBKI11E1-CD (Italian)	Gr.15: Swirl Control Valve Solenoid Check <4M4 with swirl control system> (M151-01-090-12000-01)	Attached sheet 2
		Gr.17: EGR Cooler Bypass Valve Solenoid Valve Check <Euro 5> (M175-01-140-01400-01)	Attached sheet 3
		Gr.23C: How to Initialise A/T Learning Value (M231-10-430-05700-01)	Attached sheet 19
		Gr.23C: Transmission Control Removal and Installation (M231-11-790-54300-01)	Attached sheet 17
		Gr.23D:Transmission Disassembly (M233-10-090-01900-01)	Attached sheet 4

Attached sheet 2

SWIRL CONTROL VALVE SOLENOID CHECK

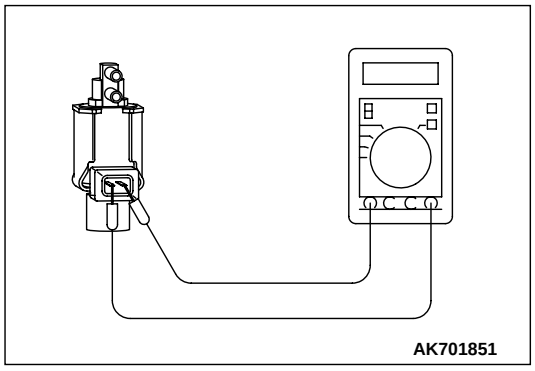
1. Disconnect the vacuum hoses from the swirl control valve (SCV) solenoid.
   NOTE: When disconnecting the vacuum hose, always make sure that it can be reconnected at its original position.
2. Disconnect the harness connector.
3. Connect a hand vacuum pump to nipple (A) of the swirl control valve (SCV) solenoid.
4. As described in the chart below, check airtightness by applying a vacuum with voltage applied directly from the battery to the swirl control valve (SCV) solenoid, and without applying voltage.

<Added>
or nipple (B)



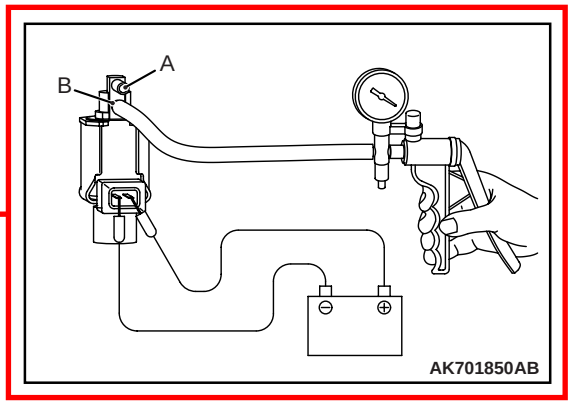
BATTERY POSITIVE VOLTAGE	NIPPLE (B) CONDITION	NORMAL CONDITION
Applied	Open	Vacuum leaks
	Closed	Vacuum maintained
Not applied	Closed	Vacuum leaks

5. Measure the resistance between the terminals of the swirl control valve (SCV) solenoid.
   Standard value: 29 – 35 Ω (at 20°C)
6. Replace the solenoid if airtightness or resistance is out of specification.



BATTERY POSITIVE VOLTAGE	NIPPLE (A) CONDITION	NIPPLE (B) CONDITION	NORMAL CONDITION
Applied	Connect hand vacuum pump	Open	Vacuum leaks
		Closed	Vacuum maintained
Not applied		Open	Vacuum maintained
	Closed	Connect hand vacuum pump	Vacuum leaks

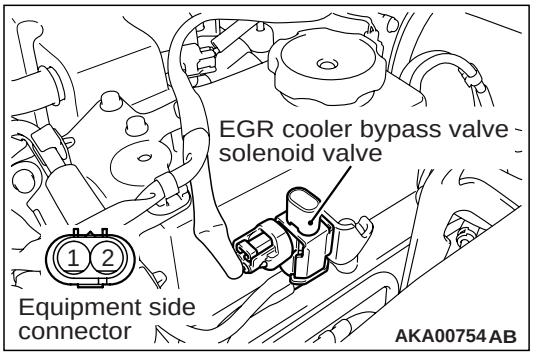
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<Added>

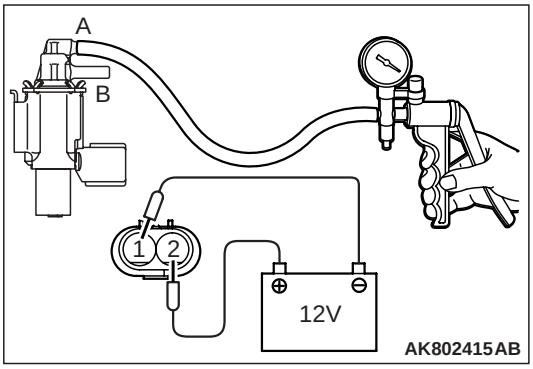
Attached sheet 3

EGR COOLER BYPASS VALVE SOLENOID VALVE CHECK <Euro 5>



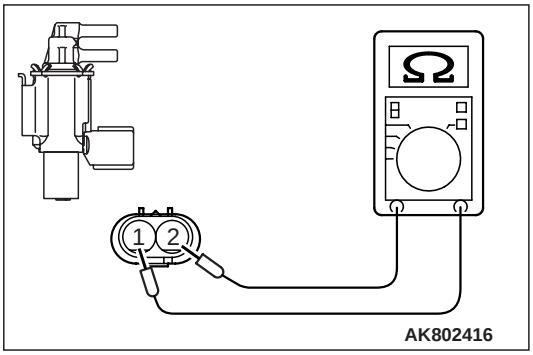
1. Disconnect the vacuum hoses from the EGR cooler bypass valve solenoid valve.
2. Disconnect the harness connector.

<Added>
or nipple (B)



3. Connect a hand vacuum pump to nipple (A) of the EGR cooler bypass valve solenoid valve.
4. As described in the chart below, check airtightness by applying a vacuum with voltage applied directly from the battery to the EGR cooler bypass valve solenoid valve, and without applying voltage.

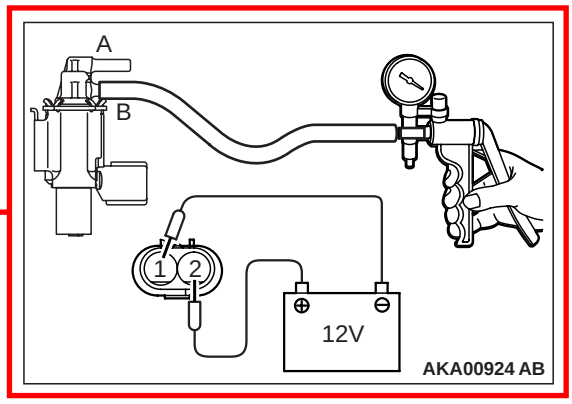
BATTERY POSITIVE VOLTAGE	NIPPLE (B) CONDITION	NORMAL CONDITION
Applied	Open	Vacuum leaks
	Closed	Vacuum maintained
Not applied	Open	Vacuum maintained



5. Measure the resistance between terminal No. 1 and No. 2.
   Standard value: 29 – 35 Ω (at 20°C)
6. Replace the solenoid if airtightness or resistance is out of specification.

BATTERY POSITIVE VOLTAGE	NIPPLE (A) CONDITION	NIPPLE (B) CONDITION	NORMAL CONDITION
Applied	Connect hand vacuum pump	Open	Vacuum leaks
		Closed	Vacuum maintained
Not applied		Open	Vacuum maintained
	Closed	Connect hand vacuum pump	Vacuum leaks

<Changed>



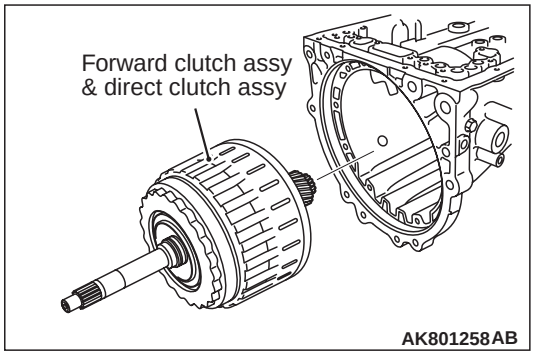
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29. FORWARD CLUTCH ASSY & DIRECT CLUTCH ASSY REMOVAL

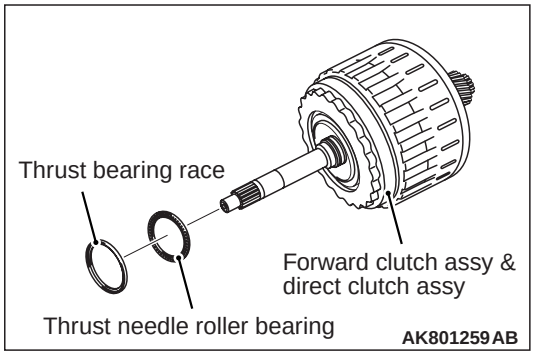
⚠ CAUTION

- **Be careful not to drop the forward clutch assy & direct clutch assy.**
- **Be careful not to drop the one-way clutch No.3**

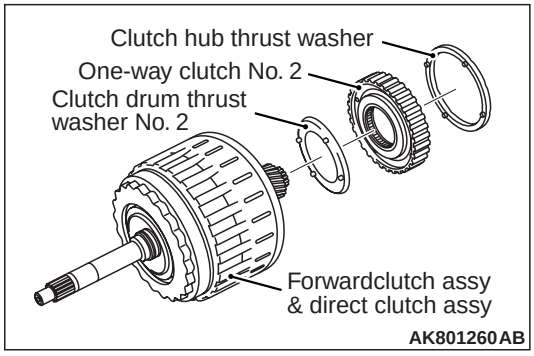
<Incorrect>
~~No.3~~
No.2
<Correct>



1. Remove the forward clutch assy & direct clutch assy with the one-way clutch No. 3.

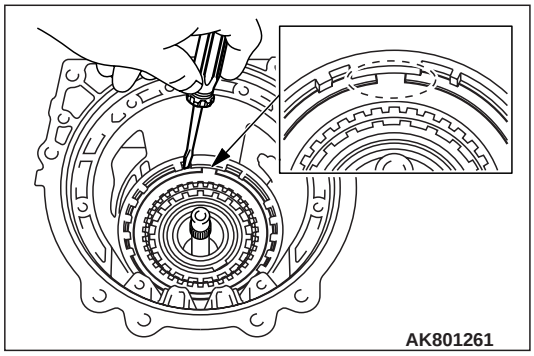


2. Remove the thrust bearing race and the thrust needle roller bearing from the forward clutch assy & direct clutch assy.

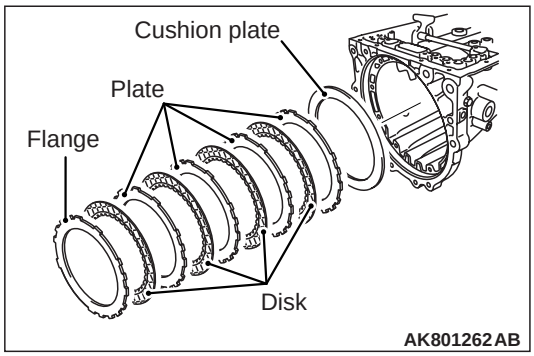


3. Remove the clutch hub thrust washer, one-way clutch No. 2 and the clutch drum thrust washer No. 2 from the forward clutch assy & direct clutch assy.

30. BRAKE DISC SET NO. 3 (B3) REMOVAL



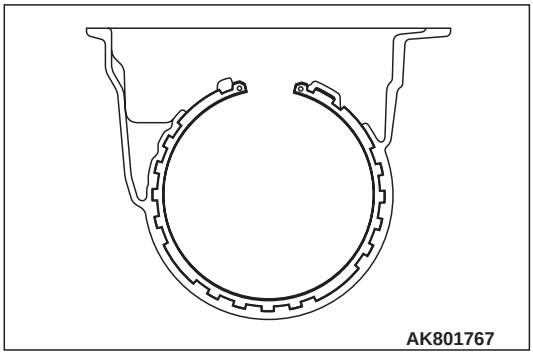
1. Using a screwdriver, remove the snap ring from the transmission case.



2. Remove the flange, 4 discs, 4 plates and cushion plate.

   NOTE: Check the number of disc. (Refer to TRANSMISSION INSPECTION-INSPECT BRAKE DISK SET No. 3 (B3) P.23D-40)

31. BRAKE PISTON RETURN SPRING SUB-ASSY NO. 3 & SECOND BRAKE PISTON & SECOND BRAKE CYLINDER REMOVAL



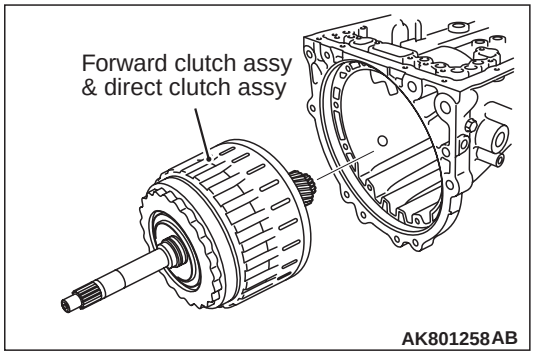
1. Remove the hole snap ring from the transmission case.

29. FORWARD CLUTCH ASSY & DIRECT CLUTCH ASSY REMOVAL

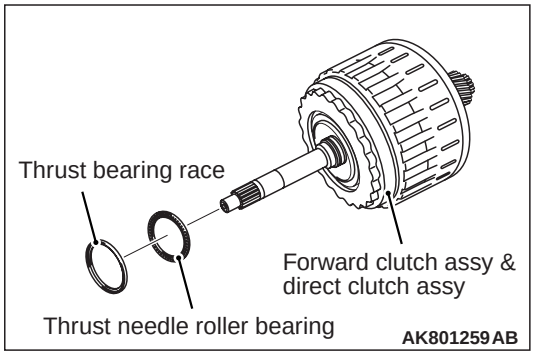
⚠ CAUTION

- **Be careful not to drop the forward clutch assy & direct clutch assy.**
- **Be careful not to drop the one-way clutch No.3**

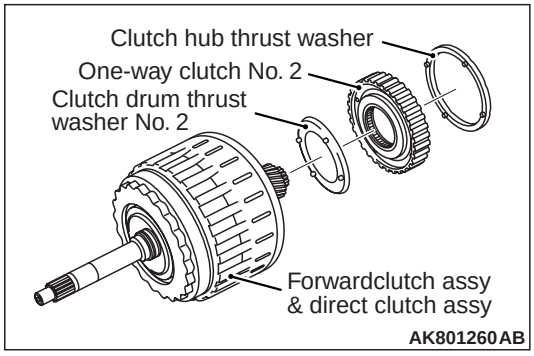
<Incorrect>
~~No.3~~
<Correct>
No.2



1. Remove the forward clutch assy & direct clutch assy with the one-way clutch No. 3.

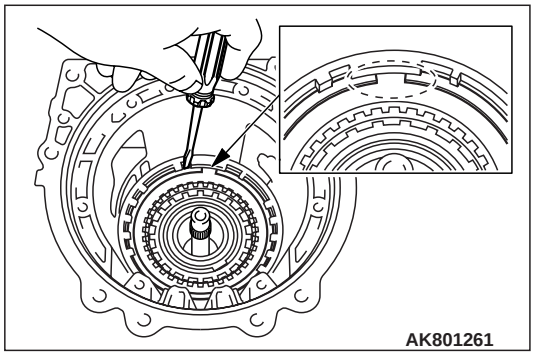


2. Remove the thrust bearing race and the thrust needle roller bearing from the forward clutch assy & direct clutch assy.

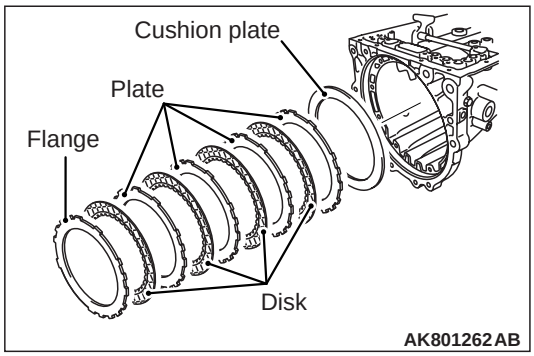


3. Remove the clutch hub thrust washer, one-way clutch No. 2 and the clutch drum thrust washer No. 2 from the forward clutch assy & direct clutch assy.

30. BRAKE DISC SET NO. 3 (B3) REMOVAL



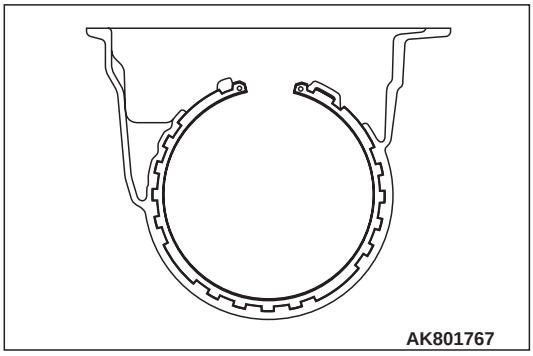
1. Using a screwdriver, remove the snap ring from the transmission case.



2. Remove the flange, 4 discs, 4 plates and cushion plate.

   NOTE: Check the number of disc. (Refer to TRANSMISSION INSPECTION-INSPECT BRAKE DISK SET No. 3 (B3) P.23D-41)

31. BRAKE PISTON RETURN SPRING SUB-ASSY NO. 3 & SECOND BRAKE PISTON & SECOND BRAKE CYLINDER REMOVAL



1. Remove the hole snap ring from the transmission case.

Attached sheet 6(1/3)

INLET MANIFOLD

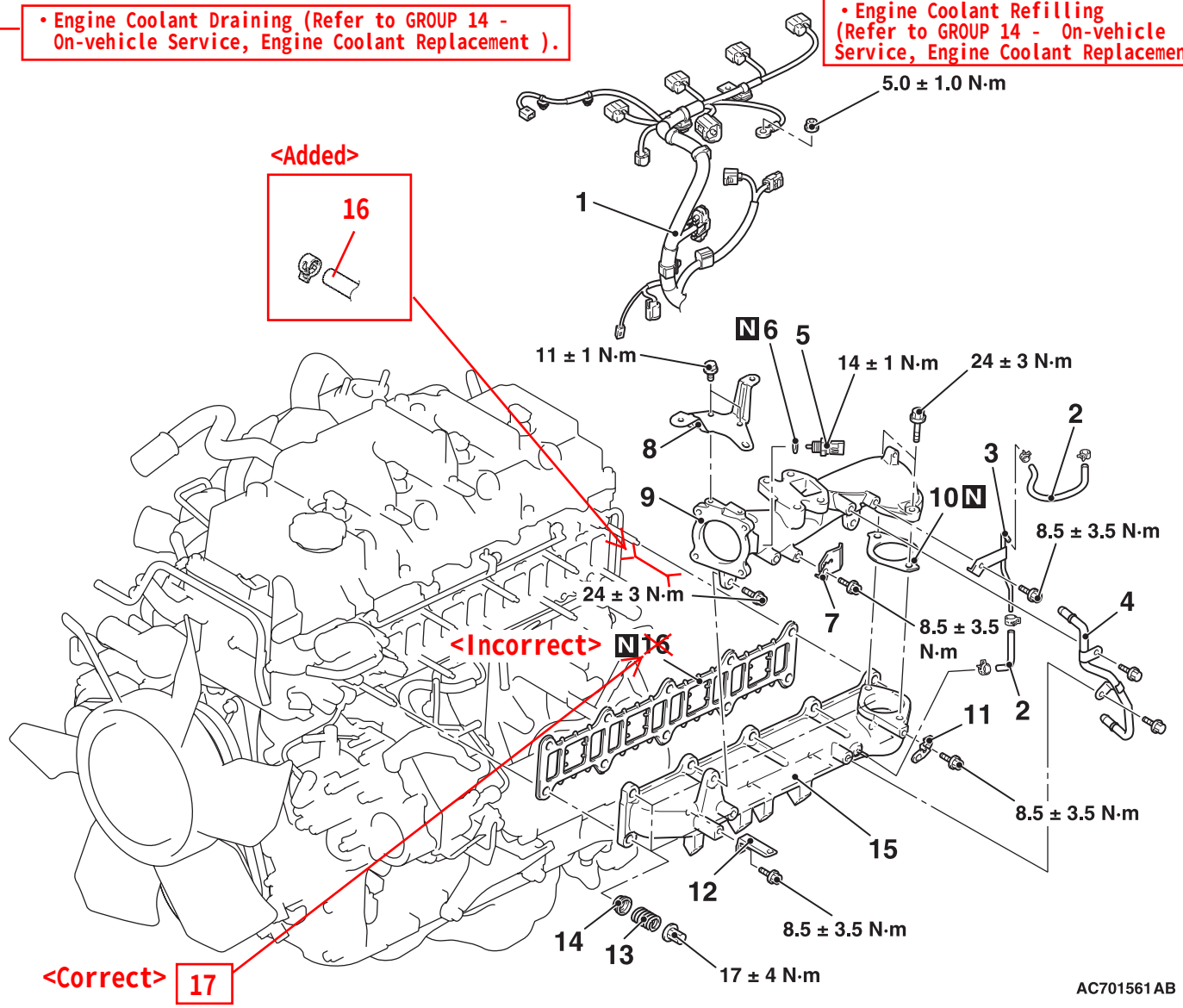
REMOVAL AND INSTALLATION <4M4 (EMISSION REGULATION STEP III>

Pre-removal Operation
- Engine Cover Removal (Refer to GROUP 11C – Engine Assembly).
- Throttle Body Assembly Removal (Refer to GROUP 13B – Throttle Body Assembly).
- EGR Valve and EGR Pipe Removal (Refer to GROUP 17 – Emission Control, EGR Valve and EGR Cooler).

Post-installation Operation
- EGR Valve and EGR Pipe Installation (Refer to GROUP 17 – Emission Control, EGR Valve and EGR Cooler).
- Throttle Body Assembly Installation (Refer to GROUP 13B – Throttle Body Assembly).
- Engine Cover Installation (Refer to GROUP 11C – Engine Assembly).

<Added>
• Engine Coolant Draining (Refer to GROUP 14 - On-vehicle Service, Engine Coolant Replacement).

<Added>
• Engine Coolant Refilling (Refer to GROUP 14 - On-vehicle Service, Engine Coolant Replacement).



Removal steps
1. Control wiring harness connection
2. Vacuum hose
3. Vacuum pipe assembly
4. Fuel return B pipe assembly
5. Intake air temperature sensor No.2
6. Gasket
7. Harness bracket
8. Engine cover B bracket
9. Air inlet pipe

Removal steps
10. Gasket
11. Harness bracket
12. Harness bracket
- <Incorrect> ~~Fuel supply pump pipe assembly, fuel injection pipe assembly, common rail assembly, fuel pipe bracket (Refer to GROUP 13B – Fuel Injector and Common Rail).~~

13. Spring

<Correct>
Fuel supply pump pipe assembly, fuel injection pipe assembly, common rail assembly, fuel pipe bracket, fuel return A pipe assembly (Refer to GROUP 13B - Fuel Injector and Common Rail).

Attached sheet 6(2/3)

<Added>
16. Heater hose connection

Removal steps
14. Retainer
15. Inlet manifold assembly
16. Inlet manifold gasket

<Incorrect> ~~16~~ 17 <Correct>

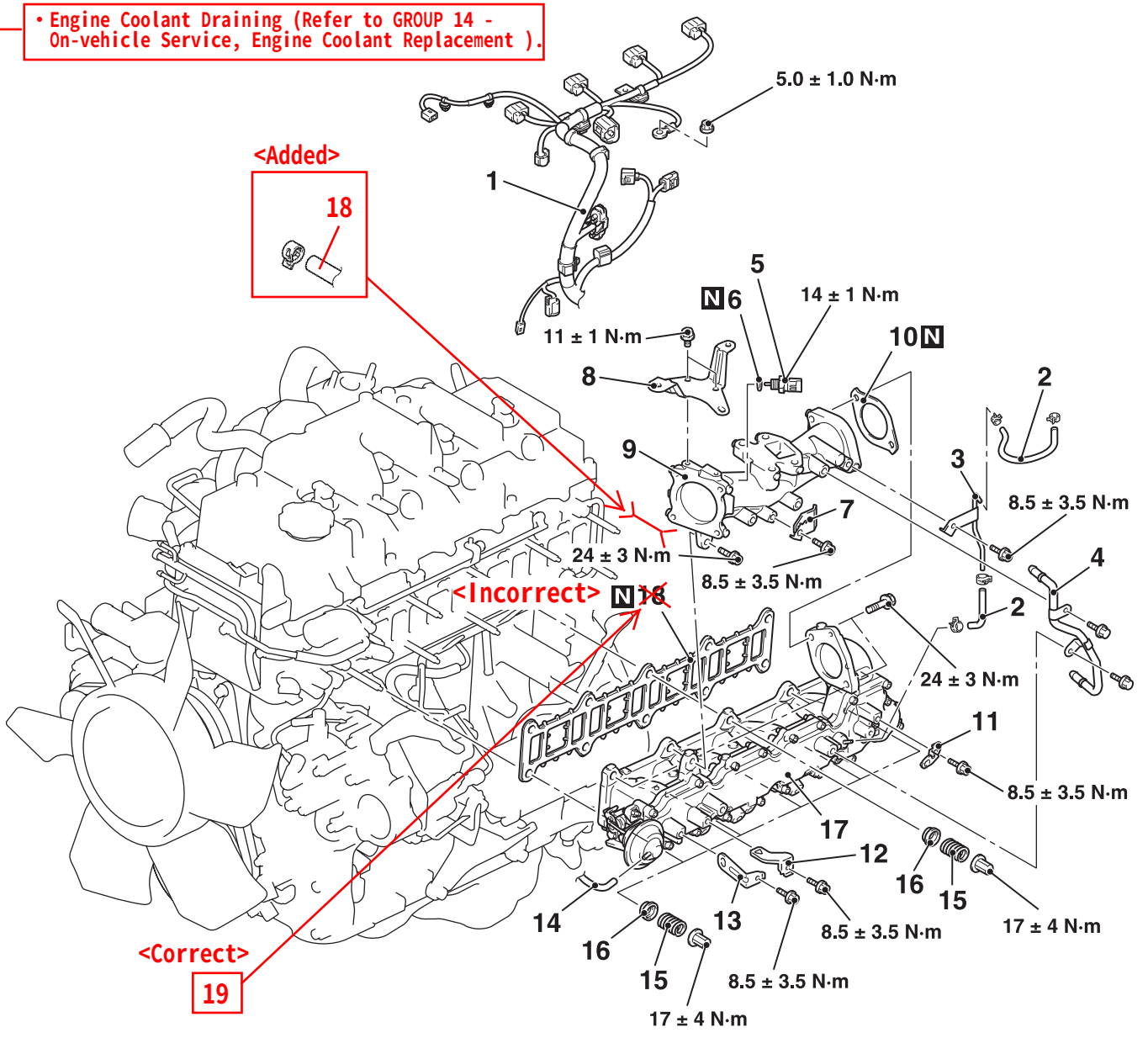
<Added>
• Engine Coolant Refilling (Refer to GROUP 14 - On-vehicle Service, Engine Coolant Replacement).

REMOVAL AND INSTALLATION <4M4 (EMISSION REGULATION STEP IV)>

Pre-removal Operation
- Engine Cover Removal (Refer to GROUP 11C – Engine Assembly).
- Throttle Body Assembly Removal (Refer to GROUP 13B – Throttle Body Assembly).
- EGR Valve and EGR Pipe Removal (Refer to GROUP 17 – Emission Control, EGR Valve and EGR Cooler).

Post-installation Operation
- EGR Valve and EGR Pipe Installation (Refer to GROUP 17 – Emission Control, EGR Valve and EGR Cooler).
- Throttle Body Assembly Installation (Refer to GROUP 13B – Throttle Body Assembly).
- Engine Cover Installation (Refer to GROUP 11C – Engine Assembly).

<Added>
• Engine Coolant Draining (Refer to GROUP 14 - On-vehicle Service, Engine Coolant Replacement).



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Removal steps
1. Control wiring harness connection
2. Vacuum hose

Removal steps
3. Vacuum pipe assembly
4. Fuel return B pipe assembly

Removal steps

5. Intake air temperature sensor No.2
6. Gasket
7. Harness bracket
8. Engine cover B bracket
9. Air inlet pipe
10. Gasket
11. Harness bracket
12. Harness bracket
    - ~~Fuel supply pump pipe assembly, Fuel injection pipe assembly, Common rail assembly, Fuel pipe bracket (Refer to GROUP 13B – Fuel Injector and Common Rail).~~ <Incorrect>
    - <Correct> Fuel supply pump pipe assembly, fuel injection pipe assembly, common rail assembly, fuel pipe bracket, fuel return A pipe assembly (Refer to GROUP 13B - Fuel Injector and Common Rail).
13. Harness bracket
14. Vacuum hose connection
15. Spring
16. Retainer
17. Inlet manifold assembly
18. ~~Inlet manifold gasket~~ <Incorrect>

<Added> 18. Heater hose connection

<Correct> 19

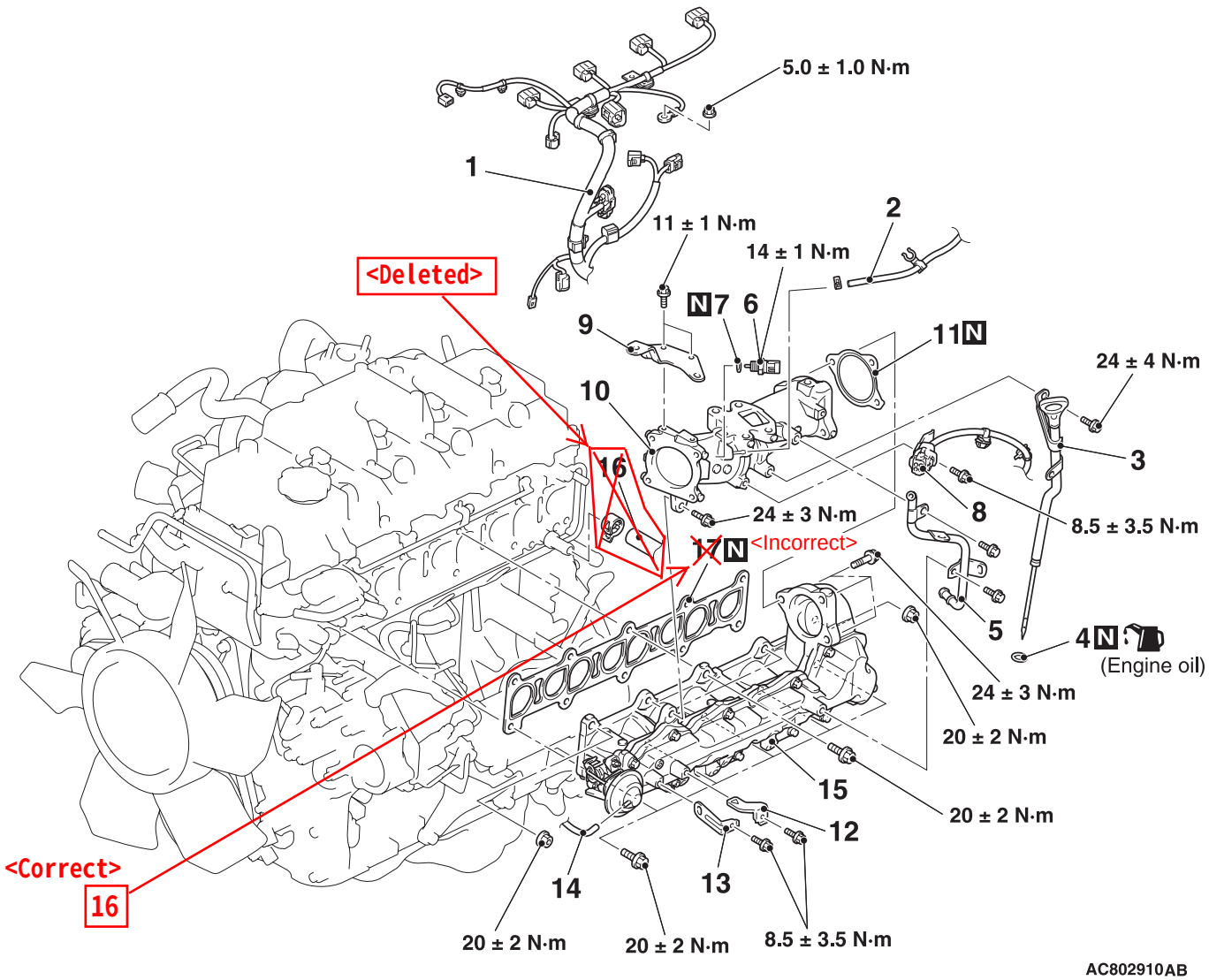
INLET MANIFOLD

REMOVAL AND INSTALLATION <4M4>

<Added>
<LOW POWER>

Pre-removal Operation	Post-installation Operation
• Engine Coolant Draining (Refer to GROUP 14 – On-vehicle Service, Engine Coolant Replacement). • Engine Cover Removal (Refer to GROUP 11C – Engine Assembly). • Battery Removal (Refer to GROUP 54A – Battery). • Throttle Body Assembly Removal (Refer to GROUP 13B – Throttle Body Assembly). • EGR Valve and EGR Pipe Removal (Refer to GROUP 17 – Emission Control, EGR Valve and EGR Cooler).	• EGR Valve and EGR Pipe Installation (Refer to GROUP 17 – Emission Control, EGR Valve and EGR Cooler). • Throttle Body Assembly Installation (Refer to GROUP 13B – Throttle Body Assembly). • Battery Installation (Refer to GROUP 54A – Battery). • Engine Cover Installation (Refer to GROUP 11C – Engine Assembly). • Engine Coolant Refilling (Refer to GROUP 14 – On-vehicle Service, Engine Coolant Replacement).

<HIGH POWER>



Removal steps
1. Control wiring harness connection
2. Vacuum hose connection
3. Engine oil level gauge and guide assembly
4. O-ring
5. Fuel return B pipe assembly
6. Intake air temperature sensor No.2
7. Gasket
8. Fuel pressure sensor wiring harness connector and harness bracket
9. Engine cover B bracket
10. Air inlet pipe

Attached sheet 8(2/3)

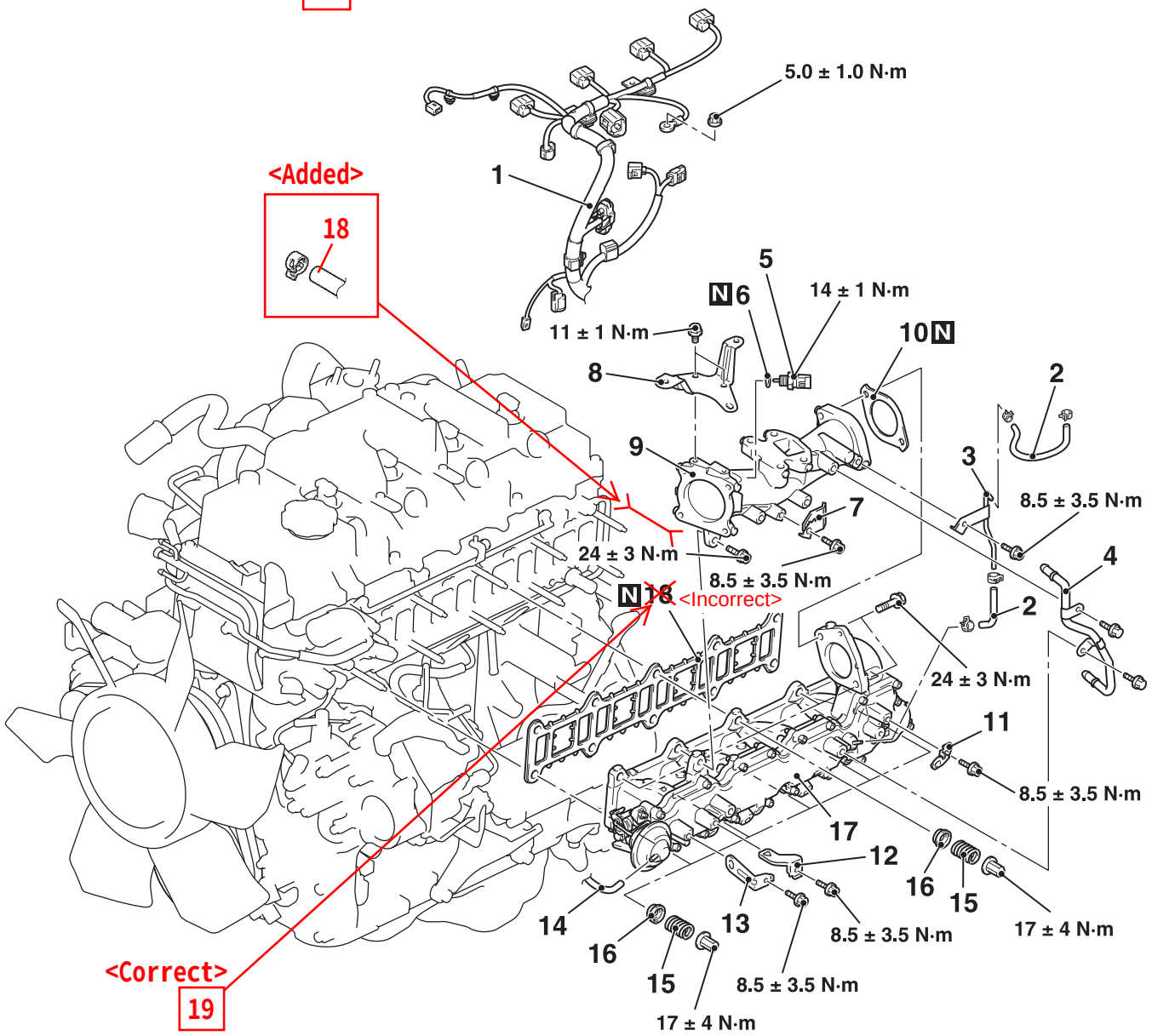
Removal steps

11. Gasket
12. Harness bracket
- ~~Fuel supply pump pipe assembly, Fuel injection pipe assembly, Common rail assembly, Fuel pipe bracket (Refer to GROUP 13B – Fuel Injector and Common Rail).~~ <Incorrect>

<Correct> Fuel supply pump pipe assembly, fuel injection pipe assembly, common rail assembly, fuel pipe bracket, fuel return A pipe assembly (Refer to GROUP 13B - Fuel Injector and Common Rail)

13. Harness bracket
14. Vacuum hose connection <Emission regulation step IV>
15. Inlet manifold assembly
16. ~~Heater hose connection~~ <Deleted>
17. ~~Inlet manifold gasket~~ <Incorrect>

<LOW POWER> <Correct> 16



AC701562AB

Removal steps

1. Control wiring harness connection
2. Vacuum hose
3. Vacuum pipe assembly
4. Fuel return B pipe assembly
5. Intake air temperature sensor No.2
6. Gasket
7. Harness bracket
8. Engine cover B bracket
9. Air inlet pipe
10. Gasket
11. Harness bracket
12. Harness bracket

Removal steps

- ~~Fuel supply pump pipe assembly, Fuel injection pipe assembly, Common rail assembly, Fuel pipe bracket (Refer to GROUP 13B – Fuel Injector and Common Rail).~~

13. Harness bracket
14. Vacuum hose connection
15. Spring
16. Retainer
17. Inlet manifold assembly
18. Inlet manifold gasket

<Incorrect>

<Incorrect>

<Correct>

19

<Added>

18. Heater hose connection

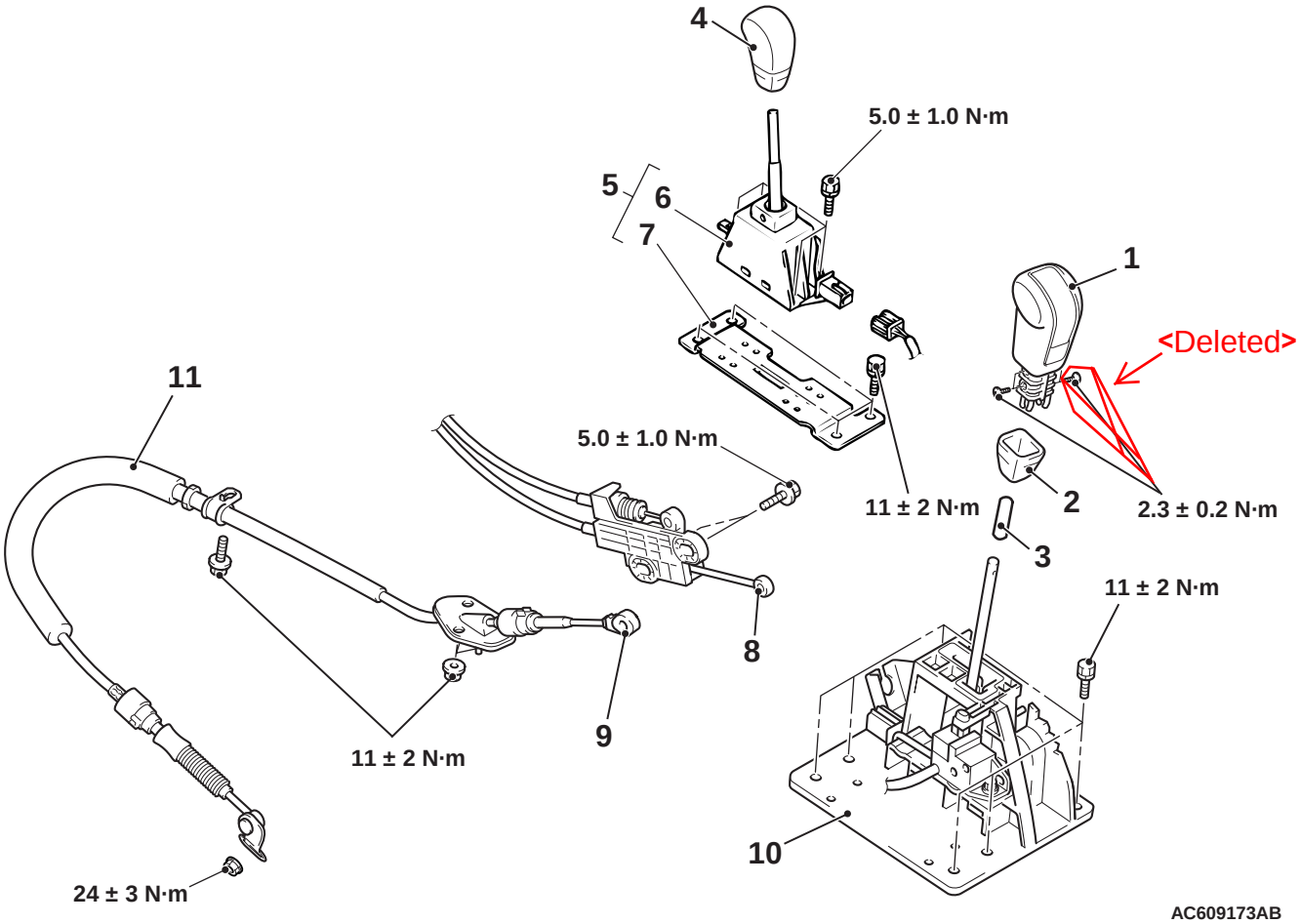
<Correct>

Fuel supply pump pipe assembly,
fuel injection pipe assembly,
common rail assembly, fuel pipe bracket,
fuel return A pipe assembly
(Refer to GROUP 13B -
Fuel Injector and Common Rail).

TRANSMISSION CONTROL

REMOVAL AND INSTALLATION

Pre-removal Operation	Post-installation Operation
Move the selector lever to the following positions. • Selector lever: N	• Transmission Control Cable Adjustment. • Check that the selector lever and the transfer control lever are moved to each position smoothly and correctly.



Selector lever assembly removal steps

1. Shift knob
2. Knob cover
3. Sleeve
4. Transfer shift lever knob
- Shift indicator panel (Refer to GROUP 52A – Floor Consol Assembly).
5. Transfer shift lever switch assembly
6. Transfer shift lever switch

Selector lever assembly removal steps (Continued)

7. Transfer shift lever switch bracket

>>A<< 8. Shift lock cable unit connection

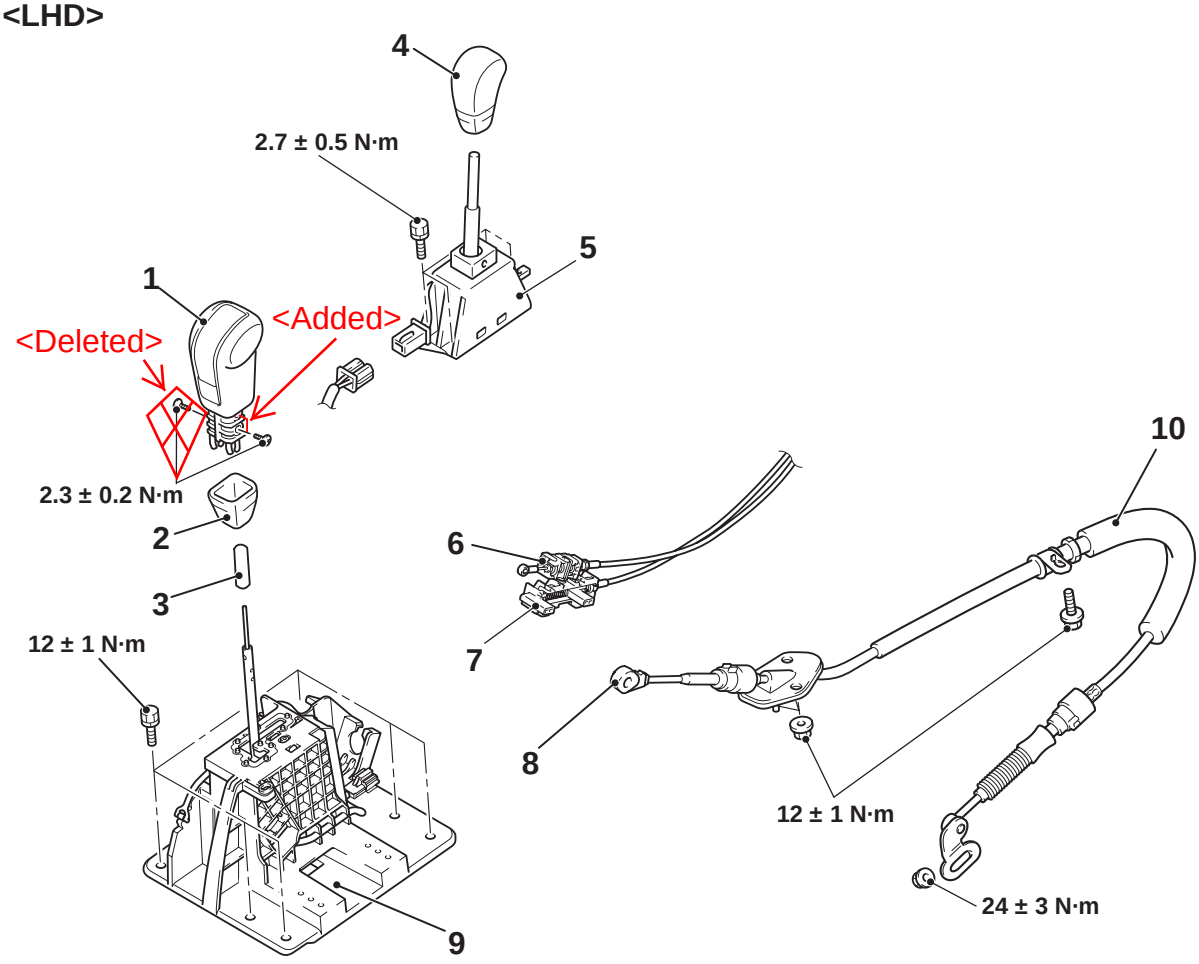
9. Transmission control cable connection
10. Selector lever assembly
11. Transmission control cable assembly

TRANSMISSION CONTROL

REMOVAL AND INSTALLATION

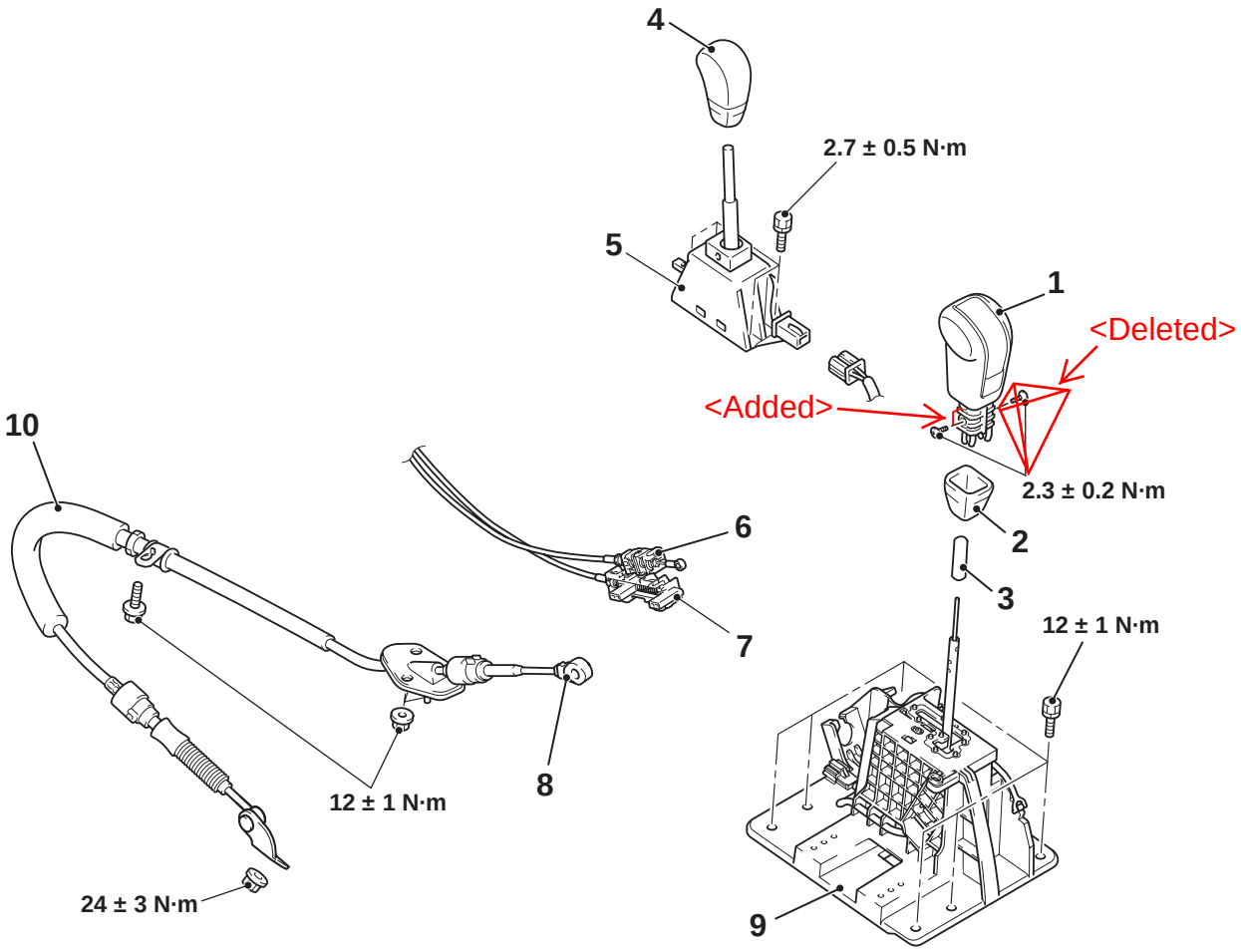
Pre-removal Operation	Post-installation Operation
Move the selector lever to the following positions. • Selector lever: N	• Transmission Control Cable Adjustment. • Check that the selector lever and the transfer control lever are moved to each position smoothly and correctly.

<LHD>



AC903171AC

<RHD>



AC903174AD

Selector lever assembly removal steps

1. Shift knob
2. Knob cover
3. Sleeve
4. Transfer shift lever knob
- Shift indicator panel (Refer to GROUP 52A – Floor Consol Assembly).
5. Transfer shift lever switch

>>**A**<< 6. Key interlock cable connection (selector lever assembly side)

Selector lever assembly removal steps (Continued)

7. Shift lock cable unit connection (selector lever assembly side)
8. Transmission control cable connection
9. Selector lever assembly
10. Transmission control cable assembly

HOW TO INITIALISE A/T LEARNING VALUE

AIM

A/T learned value must be reset whenever the automatic transmission, engine assembly, A/T valve body, or A/T solenoid valve is replaced. It cannot be reset by disconnecting the battery. Use the M.U.T.-III as follows:

INITIALISATION PROCEDURE

1. Shift the selector lever to P and turn the ignition switch to the "LOCK" (OFF) position.
2. Connect the M.U.T.-III to the vehicle's diagnosis connector.
3. In the ELC-A/T menu screen, select "Special Function," then select "Memory Reset."
4. Select "OK" to reset the A/T learned memory.
5. ~~After this initialisation, make the system learn the idling in accordance with "Learning procedure for idling in MPI engine" (Refer to GROUP 00 – Precautions before Service).~~

NOTE: A/T diagnosis codes and A/T freeze-frame data will be erased. (Engine diagnosis codes, engine-related freeze-frame data, and Readiness status will remain even after A/T Learned Value is reset.)

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A/T INITIAL LEARNING PROCEDURE

⚠ CAUTION

When the A/T or A/T-ECU is replaced, always initialise the learned value, and perform the initial learning.

⚠ CAUTION

- **Do not raise the fluid temperature with engine stall.**
- **If the fluid temperature is not between 50 and 110°C, the initial learning cannot be performed.**

1. Raise the fluid temperature by leaving the vehicle at idle or performing a city driving. Subsequently, check the fluid temperature data using the M.U.T.-III, and check that the fluid temperature is at between 50 and 110°C.

   NOTE: After the fluid temperature is raised, check the shift shock status before the learning.
2. In the 5th gear (D range) and with the throttle opening at 25 to 35%, drive until the vehicle speed becomes 80 km/h or more. Subsequently, release the accelerator pedal to decelerate, and stop the vehicle by taking 60 seconds or more. Repeat this process for 10 times.
3. Check that the shift shock is alleviated compared to before the learning.