SERVICE BULLETIN

MITSUBISHI MOTORS

AFTERSALES SERVICE OFFICE, MITSUBISHI MOTORS CORPORATION

PURPOSE : CORRECTION	ISSUE NO. : MSB-07E00-503	DATE : 2007-09-20
SUBJECT : ILLUSTRATIONS OF HOSE CONNECTION FOR PURGE CONTROL SOLENOID VALVE		<MODEL> (EUR/RUSSIA) OUTLANDER (GS45X)(CW0W) <M/Y> 07–08
GROUP : GENERAL (FUEL, EMISSION CONTROL SYSTEM, COMPONENT LOCATION)		

1. Description:

Regarding to the change of the hose connection for the purge control solenoid valve for the vehicles equipped with the 6B31 engine, the related diagram and illustration are collected in the applicable Workshop Manual. This Service Bulletin contains the modified descriptions.

2. Applicable Manuals:

<EUR>

Manual	Pub. No.	Info-ID	Attachment
2008 OUTLANDER Workshop Manual	CGXE08E1-CD (English) CGXG08E1-CD (German) CGXF08E1-CD (French) CGXS08E1-CD (Spanish)	M131-75-320-68200-01 M173-00-710-92800-01 M173-00-750-69200-01 M173-00-141-12800-01 M173-00-150-56400-01 M701-00-081-29600-01	Attachment 11 Attachment 3, 4 Attachment 9 Attachment 10 Attachment 7 Attachment 8

<RUSSIA>

Underneath Manual	Underneath Pub. No.	Info-ID	Attachment
2007 OUTLANDER Workshop Manual Supplement	Not Applicable	M131-75-320-49900-01 M173-00-710-74600-01 M173-00-750-55100-01 M173-00-140-95400-01 M173-00-150-51900-01	Attachment 12 Attachment 1, 2 Attachment 5 Attachment 6 Attachment 7

3. Corrected Specifications:

See Attachments 1 to 12.

Attachment 1

VACUUM CIRCUIT DIAGRAM

VACUUM CIRCUIT DIAGRAM

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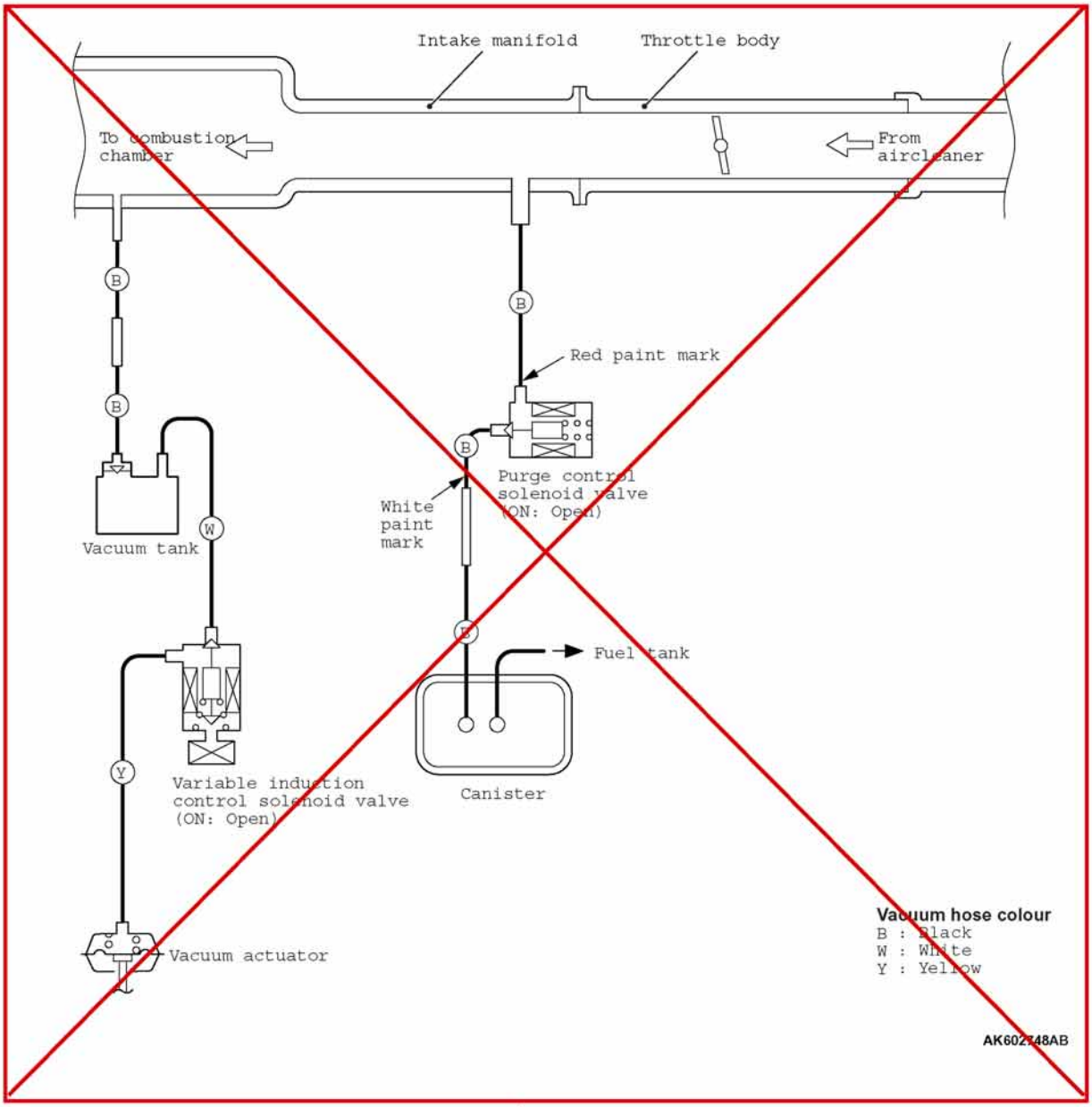

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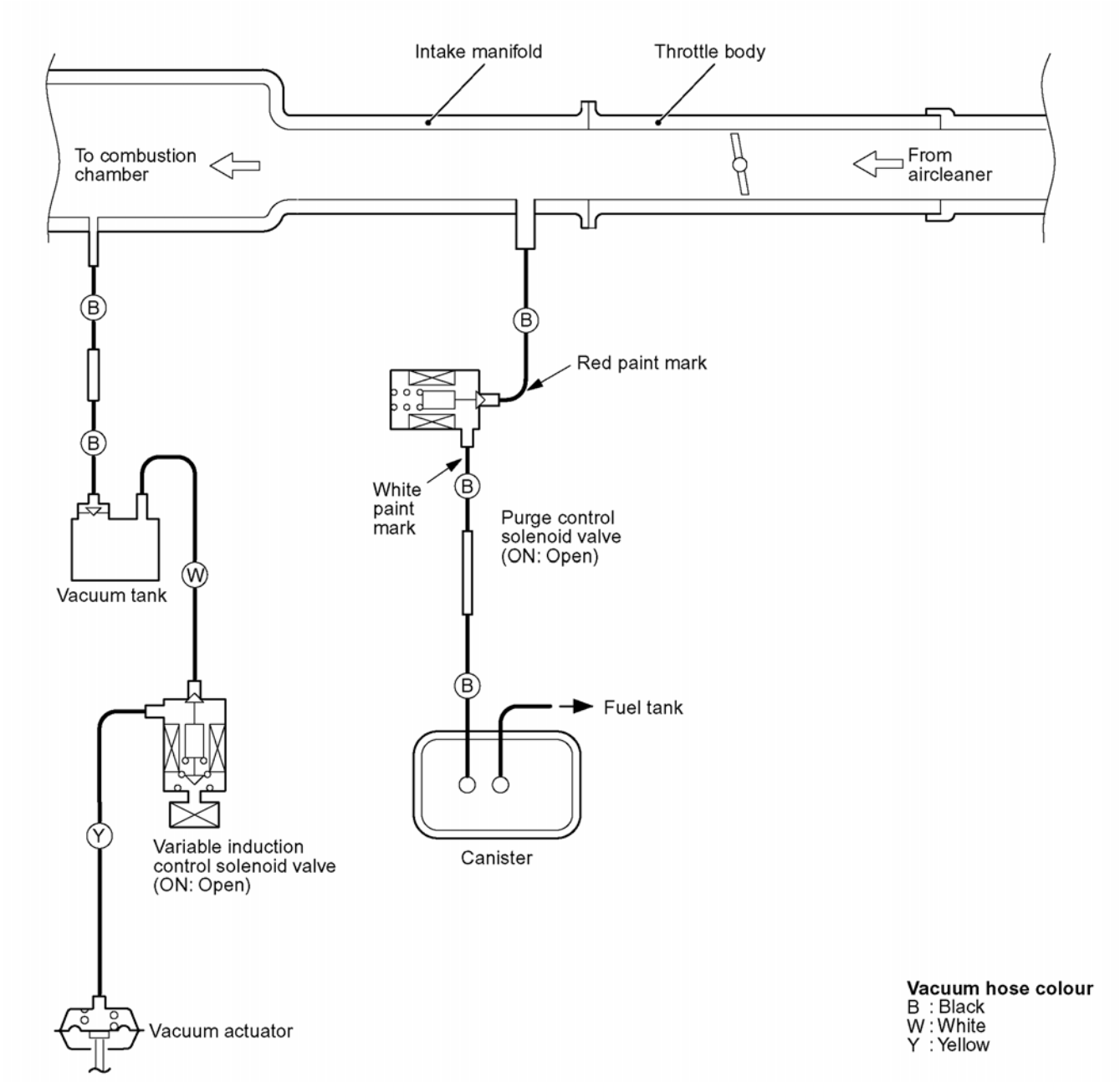
These are replaced with attachment 2

TSB Revision

Attachment 2



Attachment 3

VACUUM CIRCUIT DIAGRAM

<6B3-vehicles without exhaust gas recirculation valve>

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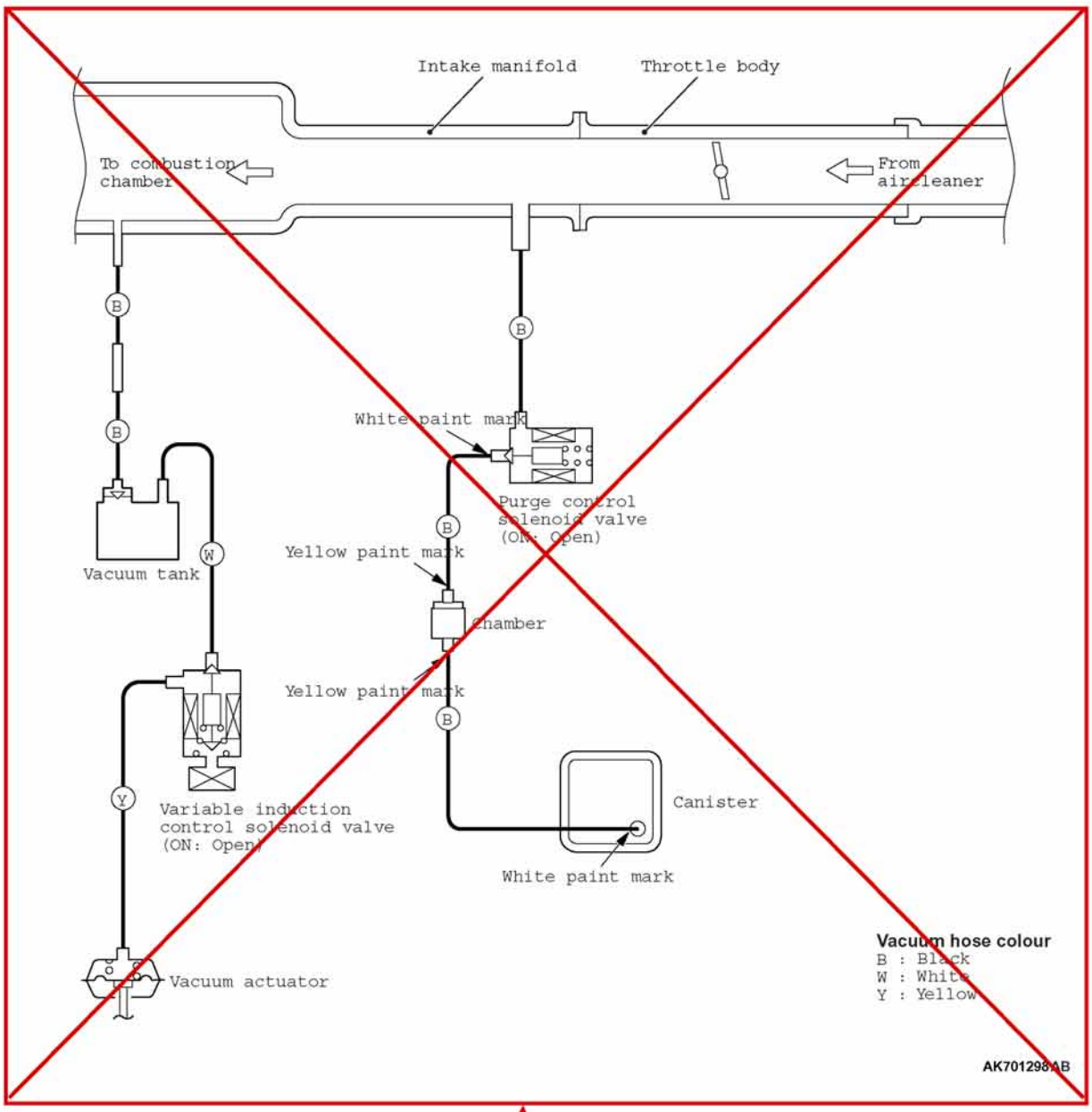

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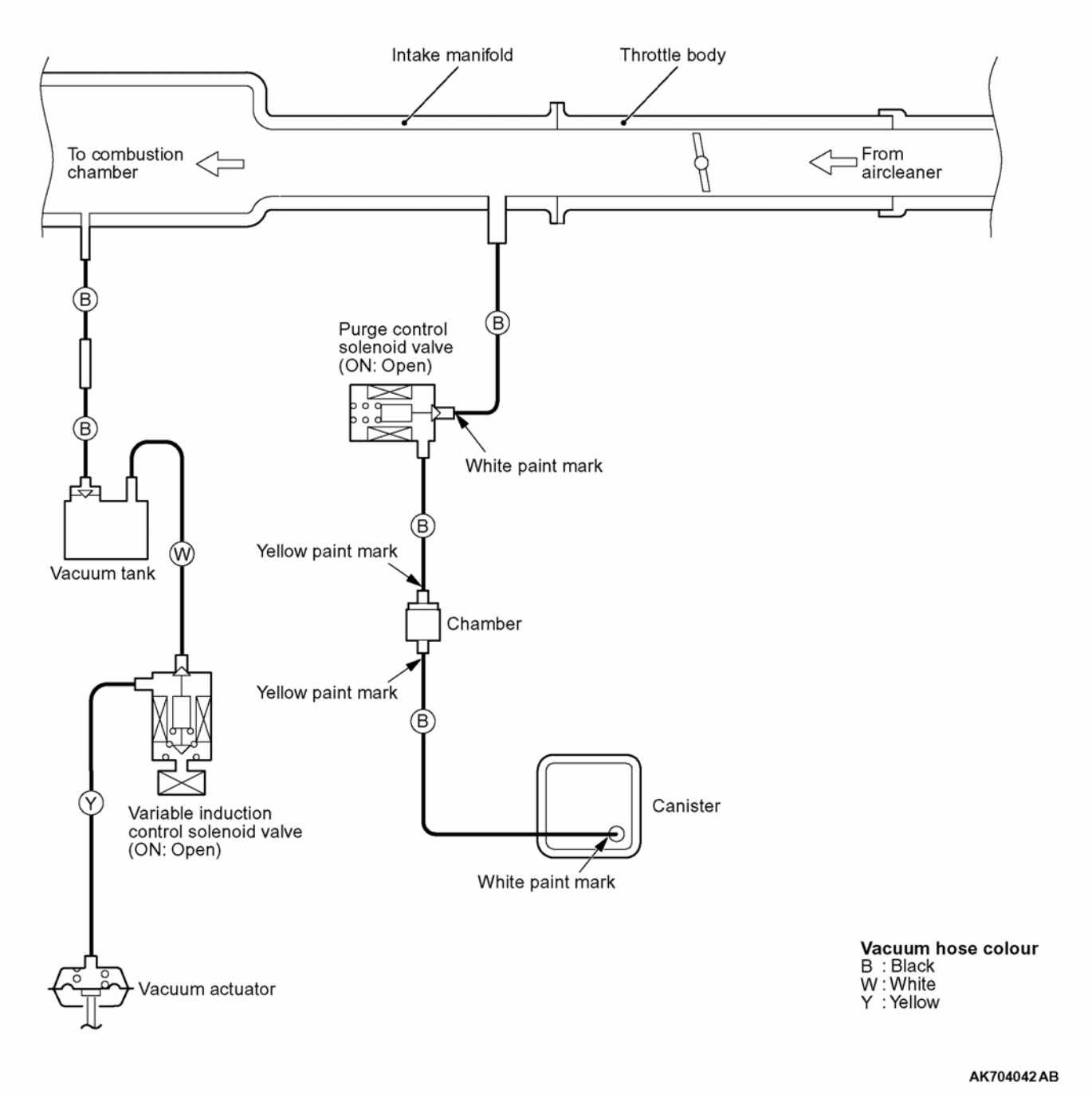
These are replaced with attachment 4

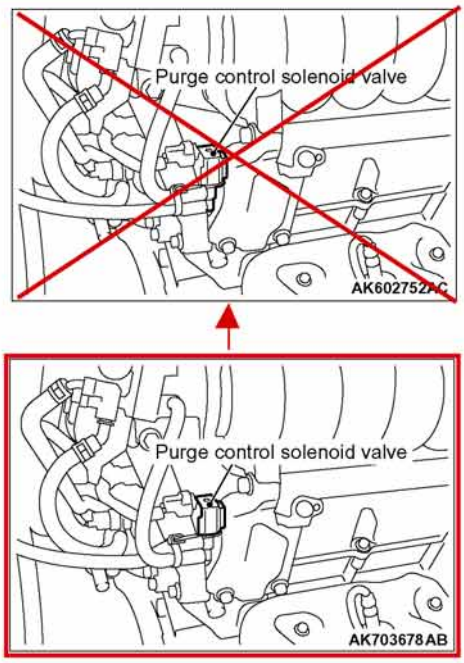
TSB Revision

Attachment 4



Attachment 5

COMPONENT LOCATION (EVAPORATIVE EMISSION CONTROL SYSTEM)



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TSB Revision

Attachment 6

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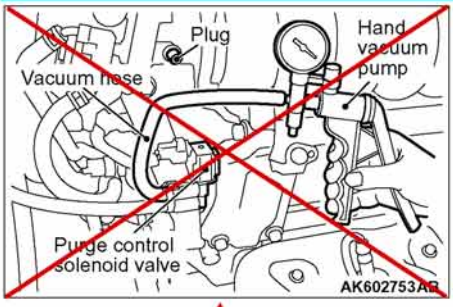

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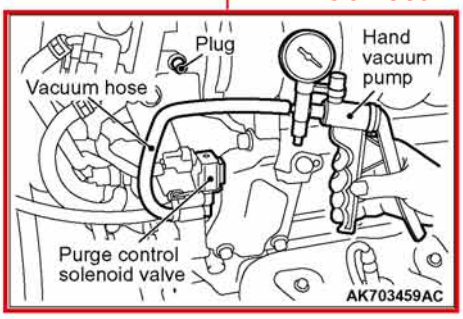

PURGE CONTROL SYSTEM CHECK

1. Disconnect the vacuum hose from the inlet manifold purge port and it to a hand vacuum pump.
2. Plug the nipple from which the vacuum hose was removed.
3. When the engine is cold or hot, apply a vacuum of 53 kPa, and check the condition of the vacuum.

When engine is cold
(Engine coolant temperature: 40°C or less)

Engine condition	Normal condition
At idle	Vacuum is maintained.
3,000 r/min	

When engine is hot
(Engine coolant temperature: 80°C or higher)

Engine condition	Normal condition
At idle	Vacuum is maintained.
3,000 r/min (within 1 minutes after engine starts)	Vacuum will leak.

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Attachment 7

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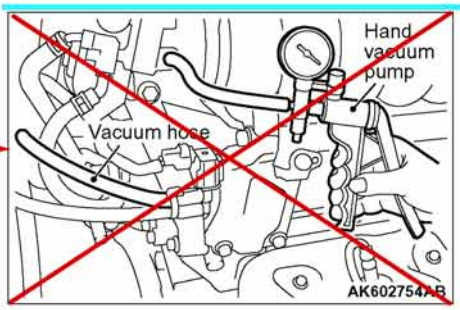
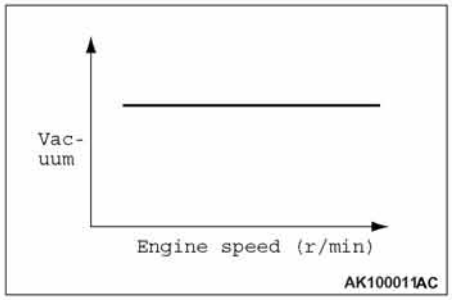


PURGE PORT VACUUM CHECK

1. Disconnect the vacuum hose from the throttle body purge vacuum nipple and connect a hand vacuum pump to the nipple.



2. Start the engine.
3. Check that a fairly constant negative pressure is generated regardless of the engine speed.
4. If no negative pressure is generated, the port is probably blocked and should be cleaned.

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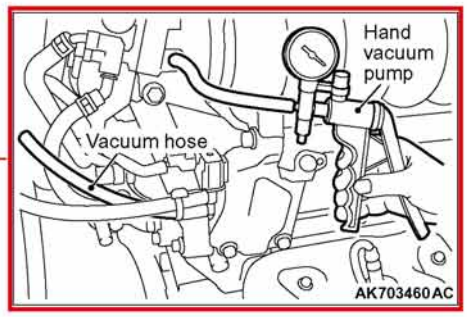

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Attachment 8

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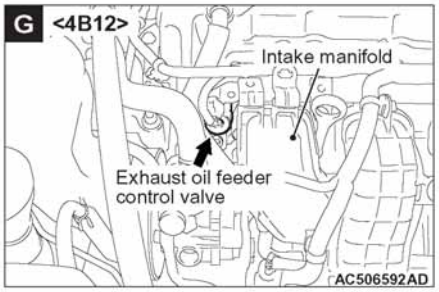

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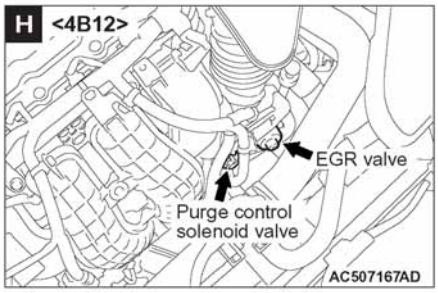

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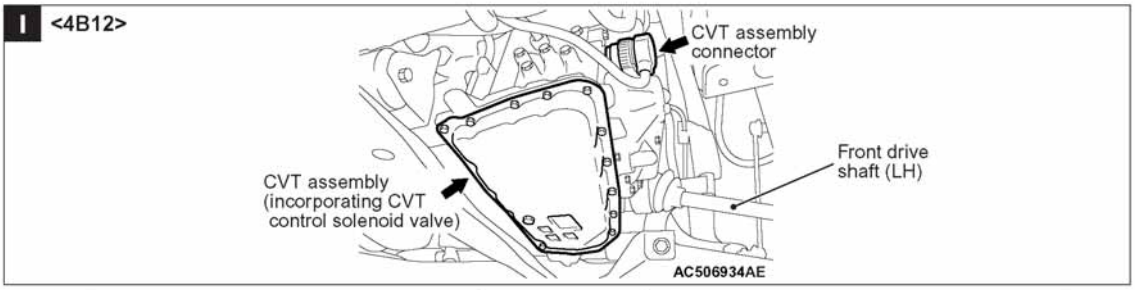

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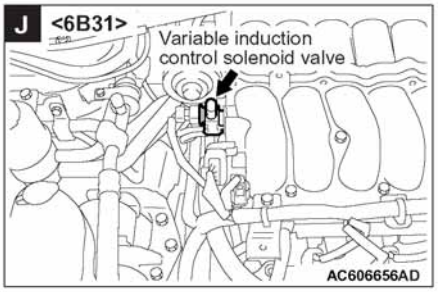

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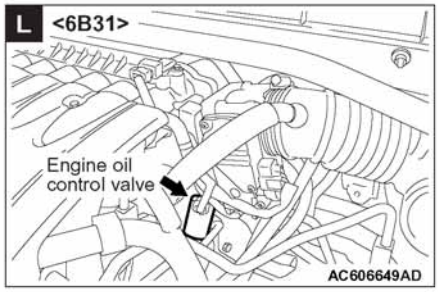

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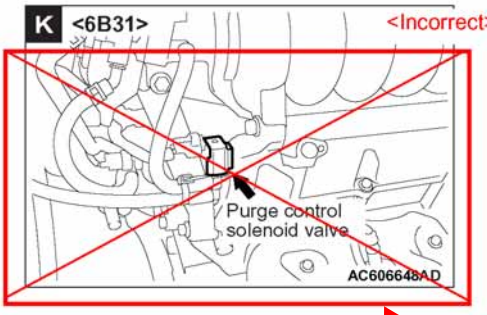

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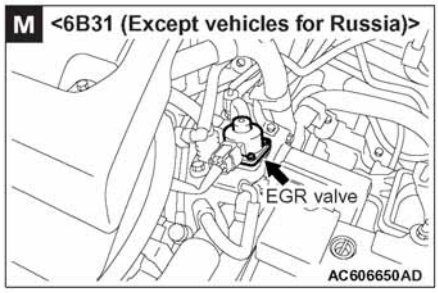

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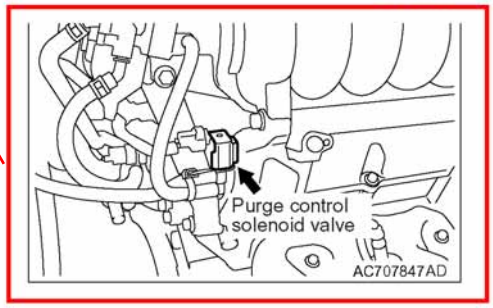

Attachment 9

COMPONENT LOCATION (EVAPORATIVE EMISSION CONTROL SYSTEM)

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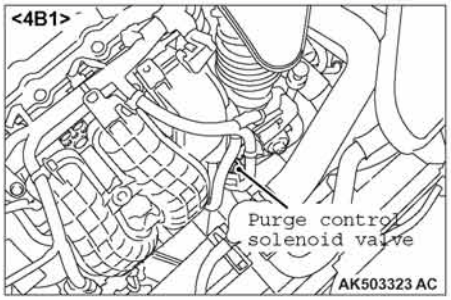

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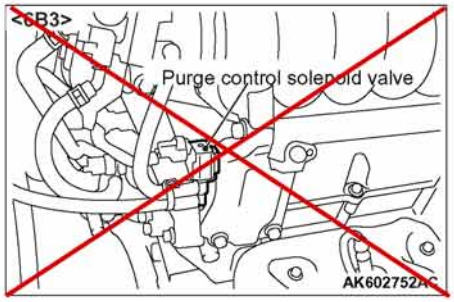

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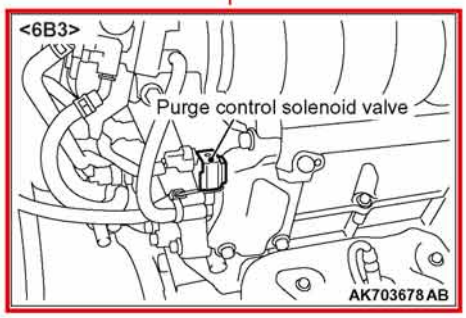

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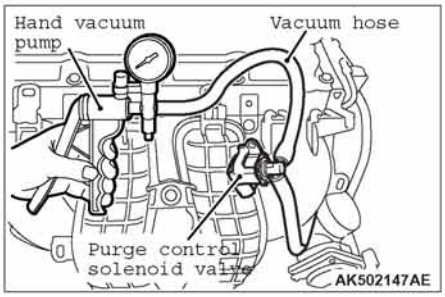
PURGE CONTROL SYSTEM CHECK

<4B1>



1. Remove the purge control solenoid valve from the inlet manifold, and cover the installation hole with tape and so on.
2. Connect the hand vacuum pump with the removed purge control solenoid valve.
3. When the engine is cold or hot, apply a vacuum of 53 kPa, and check the condition of the vacuum.

When engine is cold
(Engine coolant temperature: 40°C or lower)

Engine condition	Normal condition
At idle	Vacuum is maintained.
3,000 r/min	

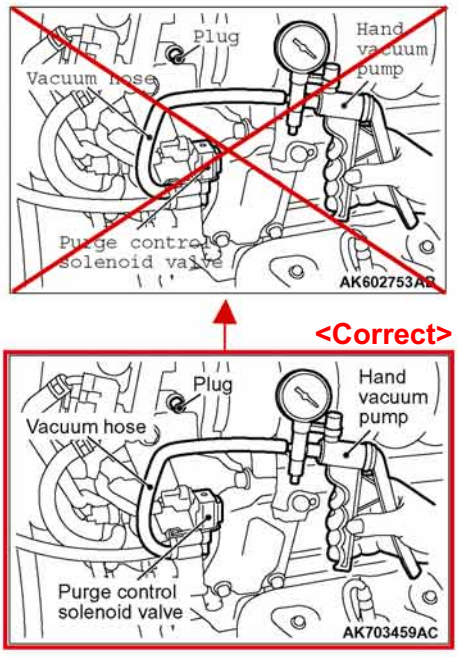
When engine is hot
(Engine coolant temperature: 80°C or higher)

Engine condition	Normal condition
At idle	Vacuum is maintained.
3,000 r/min (within 1 minutes after engine starts)	Vacuum will leak.

4. Replace the O-ring of purge control solenoid valve with the new one. Apply a small amount of new engine oil to the O-ring.
5. Tighten the mounting bolts of purge control solenoid valve to the specified torque.

   Tightening torque: 4.0 ± 1.0 N·m

<6B3>



1. Disconnect the vacuum hose (between purge control solenoid valve and intake manifold) from purge control solenoid valve and connect a hand vacuum pump to the nipple.
2. Plug the vacuum hose.
3. When the engine is cold or hot, apply a vacuum of 53 kPa, and check the condition of the vacuum.

When engine is cold
(Engine coolant temperature: 40°C or lower)

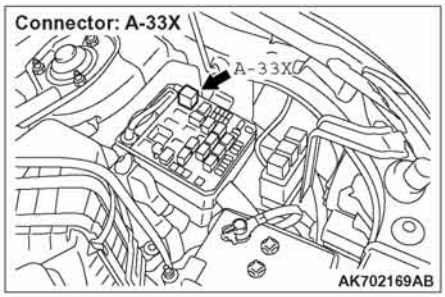
Engine condition	Normal condition
At idle	Vacuum is maintained.
3,000 r/min	

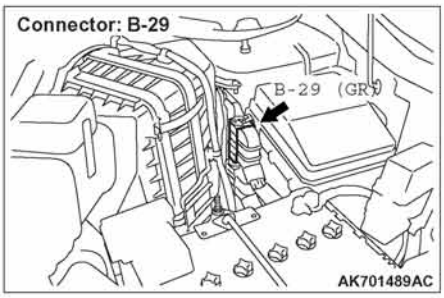
When engine is hot

Attachment 11

M1131753200682

Code No. P0443: Purge Control Solenoid Valve System





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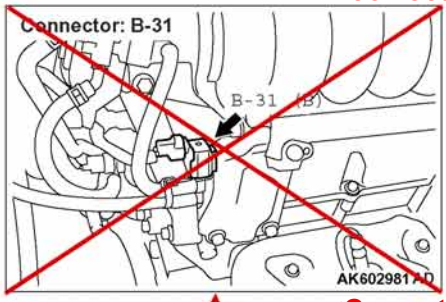

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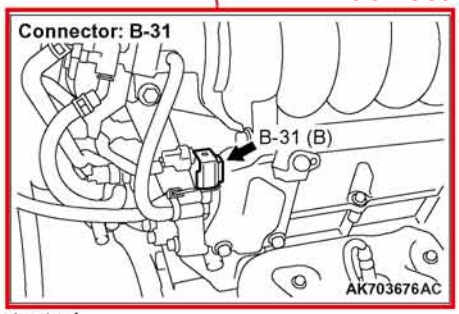

OPERATION

- Power is supplied to the purge control solenoid valve (terminal No. 2) from the engine control relay (terminal No. 2).
- The engine-ECU (terminal No. 37) makes the power transistor in the unit be in ON position, and that makes currents go on the purge control solenoid valve (terminal No. 1).

FUNCTION

- In response to a signal from the engine-ECU, the purge control solenoid valve controls the flow rate of the purge air to be introduced into the inlet manifold.

TROUBLE JUDGMENT

Check Conditions

- Engine is being cranked.
- Battery positive voltage is 10 / 16.5 V.

Judgment Criteria

- The purge control solenoid valve coil surge voltage (battery positive voltage + 2 V) is not detected.
- The engine-ECU monitors for this condition once during the drive cycle.

Check Conditions

- Battery positive voltage is 10 / 16.5 V.
- ON duty cycle of the purge control solenoid valve is 10 / 90 %.
- More than 1 second has elapsed after the abovementioned conditions have been met.

Judgment Criterion

- The purge control solenoid valve coil surge voltage (battery positive voltage + 2 V) is not detected for 1 second after the purge control solenoid valve is turned off.

PROBABLE CAUSES

- Failed purge control solenoid valve
- Open/short circuit or harness damage in purge control solenoid valve circuit or loose connector contact
- Failed engine-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III actuator test

- Item 10: Purge control solenoid valve

OK: Operating sound can be heard and the valve

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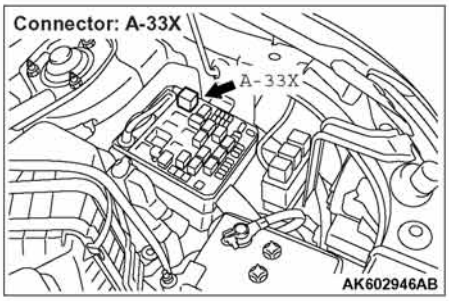
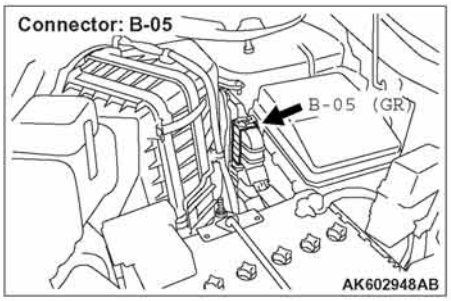
Attachment 12

Code No. P0443: Purge Control Solenoid Valve System





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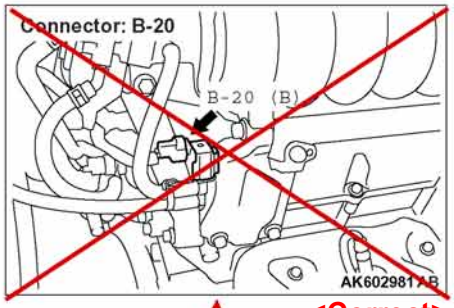

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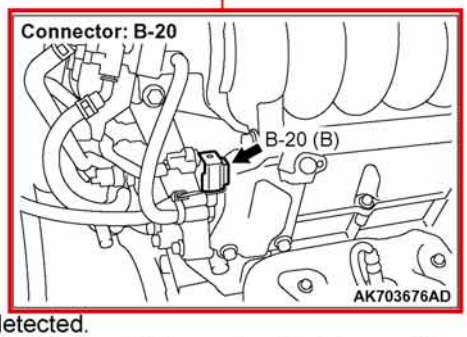

OPERATION

- Power is supplied to the purge control solenoid valve (terminal No. 2) from the engine control relay (terminal No. 2).
- The engine-ECU (terminal No. 37) makes the power transistor in the unit be in ON position, and that makes currents go on the purge control solenoid valve (terminal No. 1).

FUNCTION

- In response to a signal from the engine-ECU, the purge control solenoid valve controls the flow rate of the purge air to be introduced into the inlet manifold.

TROUBLE JUDGMENT

Check Conditions

- Engine is being cranked.
- Battery positive voltage is 10 / 16.5 V.

Judgment Criteria

- The purge control solenoid valve coil surge voltage (battery positive voltage + 2 V) is not detected.
- The engine-ECU monitors for this condition once during the drive cycle.

Check Conditions

- Battery positive voltage is 10 / 16.5 V.
- ON duty cycle of the purge control solenoid valve is 10 / 90 %.
- More than 1 second has elapsed after the abovementioned conditions have been met.

Judgment Criterion

- The purge control solenoid valve coil surge voltage (battery positive voltage + 2 V) is not detected for 1 second after the purge control solenoid valve is turned off.

PROBABLE CAUSES

- Failed purge control solenoid valve
- Open/short circuit or harness damage in purge control solenoid valve circuit or loose connector contact
- Failed engine-ECU

DIAGNOSIS PROCEDURE (A2)

STEP 1. M.U.T.-III actuator test (S1)

- Item 10: Purge control solenoid valve

OK: Operating sound can be heard and the valve

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