MITSUBISHI MOTORS

SERVICE BULLETIN

GLOBAL AFTER SALES OFFICE, MITSUBISHI MOTORS CORPORATION

PURPOSE : CORRECTION	ISSUE NO. : MSB-10E13-503	DATE : 2010-09-05
SUBJECT : RESISTANCE OF THROTTLE VALVE CONTROL SERVO		<MODEL> (EUR/RUSSIA) OUTLANDER (CW0W) <M/Y> 10–11
GROUP : FUEL		

1. Description:

In STEP 2 of the diagnosis procedures for diagnosis codes P2100 and P2101, the unit of resistance for the throttle valve control servo has been incorrect. This Service Bulletin contains the correct information.

<Correct>		<Incorrect>
Ω	←	kΩ

2. Applicable Manuals:

<EUR>

Manual	Pub. No.	Engine	Title (Info-ID)	Attached Sheet
2010 OUTLANDER Workshop Manual	CGXE10E1-CD (English) CGXF10E1-CD (French) CGXG10E1-CD (German) CGXS10E1-CD (Spanish) CGXI10E1-CD (Italian)	4B12	P2100: Throttle Valve Control Servo Circuit (open) (M131-76-150-50300-01)	Attached sheet A
			P2101: Throttle Valve Control Servo Magneto Malfunction (M131-76-160-56600-01)	Attached sheet B
2011 OUTLANDER Workshop Manual	CGXE11E1-CD (English) CGXF11E1-CD (French) CGXG11E1-CD (German) CGXS11E1-CD (Spanish) CGXI11E1-CD (Italian)	4B12	P2100: Throttle Valve Control Servo Circuit (open) (M131-76-151-07800-01)	Attached sheet A
			P2101: Throttle Valve Control Servo Magneto Malfunction (M131-76-160-89000-01)	Attached sheet B

<RUSSIA>

Underneath Manual	Underneath Pub. No.	Engine	Title (Info-ID)	Attached Sheet
2010 OUTLANDER Workshop Manual	N/A	4B12	P2100: Throttle Valve Control Servo Circuit (open) (M131-76-150-50300-01)	Attached sheet A
			P2101: Throttle Valve Control Servo Magneto Malfunction (M131-76-160-56600-01)	Attached sheet B
2011 OUTLANDER Workshop Manual	N/A	4B12	P2100: Throttle Valve Control Servo Circuit (open) (M131-76-151-07800-01)	Attached sheet A
			P2101: Throttle Valve Control Servo Magneto Malfunction (M131-76-160-89000-01)	Attached sheet B

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 A and B.

Attached sheet A

TROUBLE JUDGMENT

Check Conditions

- Battery positive voltage is more than 8.3 V.
- Difference between the throttle position sensor (main) output voltage and the target throttle position sensor (main) voltage is more than 0.1 V.
- Difference between the throttle position sensor (sub) output voltage and the target throttle position sensor (sub) voltage is more than 0.1 V.
- The drive duty of the throttle valve control servo is more than 100 %.
- Except while engine is being cranked.

or

- Battery positive voltage is more than 8.3 V.
- Difference between the target throttle position sensor (main) voltage and the throttle position sensor (main) output voltage is more than 0.1 V.
- Difference between the target throttle position sensor (sub) voltage and the throttle position sensor (sub) output voltage is more than 0.1 V.
- The drive duty of the throttle valve control servo is more than 100 %.
- Except while engine is being cranked.

Judgement Criterion

- Difference between the throttle position sensor (main) output voltage and the learning value of the middle-opened degree is less than 0.2 V.

or

- Difference between the throttle position sensor (sub) output voltage and the learning value of the middle-opened degree is less than 0.2 V.

PROBABLE CAUSES

- Failed throttle valve control servo.
- Short circuit or harness damage in throttle valve control servo circuit or lose connector contact.
- Failed engine-ECU

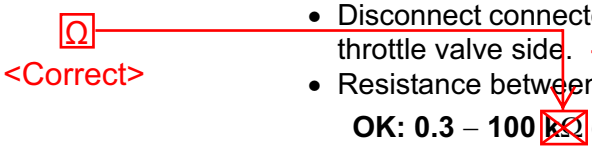
DIAGNOSIS PROCEDURE

STEP 1. Connector check: B-20 electronic-controlled throttle valve connector

Q: Is the check result normal?

YES : Go to Step 2.
NO : Repair or replace the connector.

STEP 2. Perform resistance measurement at B-20 electronic-controlled throttle valve connector.



- Disconnect connector, and measure at electronic-controlled throttle valve side.
- Resistance between terminal No. 1 and No. 2.

OK: 0.3 – 100 kΩ (at 20 °C)

Q: Is the check result normal?

YES : Go to Step 3.
NO : Replace the throttle body assembly.

STEP 3. Connector check: B-30 engine-ECU connector

Q: Is the check result normal?

YES : Go to Step 4.
NO : Repair or replace the connector.

TROUBLE JUDGMENT

Check Condition

- Battery positive voltage is higher than 8.3 V.

Judgement Criterion

- The coil current of the throttle actuator control motor is 8 A or more.

PROBABLE CAUSES

- Failed throttle valve control servo.
- Short circuit or harness damage in throttle valve control servo circuit or lose connector contact.
- Failed engine-ECU

DIAGNOSIS PROCEDURE

STEP 1. Connector check: B-20 electronic-controlled throttle valve connector

Q: Is the check result normal?

YES : Go to Step 2.
NO : Repair or replace the connector.

STEP 2. Perform resistance measurement at B-20 electronic-controlled throttle valve connector.

- Disconnect connector, and measure at electronic-controlled throttle valve side.
- Resistance between terminal No. 1 and No. 2.

OK: 0.3 – 100 kΩ (at 20 °C)

<Correct> Ω <Incorrect>

Q: Is the check result normal?

YES : Go to Step 3.
NO : Replace the throttle body assembly.

STEP 3. Connector check: B-29 engine-ECU connector

Q: Is the check result normal?

YES : Go to Step 4.
NO : Repair or replace the connector.

STEP 4. Check harness between B-20 (terminal No. 1) electronic-controlled throttle valve connector and B-29 (terminal No. 15) engine-ECU connector.

- Check output line for short circuit and damage.

Q: Is the check result normal?

YES : Go to Step 5.
NO : Repair the damaged harness wire.

STEP 5. Check harness between B-20 (terminal No. 2) electronic-controlled throttle valve connector and B-29 (terminal No. 16) engine-ECU connector.

- Check output line for short circuit and damage.

Q: Is the check result normal?

YES : Go to Step 6.
NO : Repair the damaged harness wire.