LEXUS Service Bulletin

Section :	Engine
Ref. No. :	EG-5009 (Revised)
Date :	Feb.,2006
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Area Application : USA, Canada, Europe, General, G.C.C. Countries, Australia
Model Name : ALL MODELS
Model Code : ALL

Subject : CHANGES IN INSPECTION METHOD FOR MASS AIR FLOW METER

This Service Bulletin provides information on changes to the inspection method for DENSO made mass air flow meters. Mass air flow meters have "DENSO" or "HITACHI" written on them. For HITACHI made mass air flow meters, use the procedures provided previously.

Part No. Information :

New Part No.	New Part Name	Qty
NA	NA	-

Production Effective :

VIN	Production Date
Listed in table in procedures*	NA

HINT:
*: The VIN numbers are provided only as a reference.
CHANGES:

- Information about tester displays "LONG FT#1" and "LONG FT#2"have been added.
- VIN number information for North America models has been added.
- RX300 1MZ-FE information (Destination: Europe) has been added.
- GS300 2JZ-GE for Australia and G.C.C. (Line-off) has been corrected.

ENGINE

MASS AIR FLOW METER

INSPECTION

NOTICE:

The MAF meter inspection procedure changes are for vehicles with DENSO made MAF meters. Vehicles with HITACHI made MAF meters do not apply.

INSPECT MASS AIR FLOW METER

a. Check the mass air flow value.

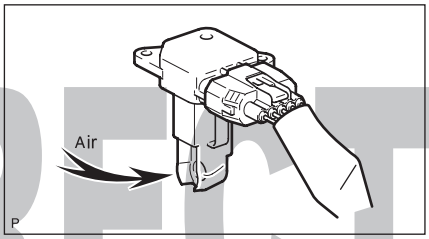
i. Connect intelligent tester to the DLC3.

ii. Turn the engine switch ON (IG).

iii. Push the intelligent tester main switch ON.

iv. Enter the following menus:
DIAGNOSIS / ENHANCED OBD II /
DATA LIST / PRIMARY / MAF.

v. Blow air into the MAF meter, and check that the MAF value fluctuates.
If the result is not as specified, check the MAF meter (see next procedure), or wiring and ECM.



b. Check the output voltage.

i. Disconnect the MAF meter connector and remove the 2 screws and MAF meter.

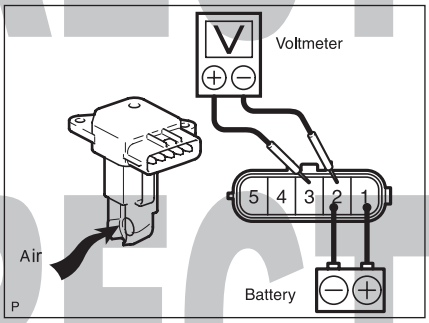
ii. Apply battery voltage across terminals 1 (+B) and 2 (E2G).

NOTICE:
While using the battery during inspection, do not bring the positive and negative tester probes too close to each other as a short circuit may occur.

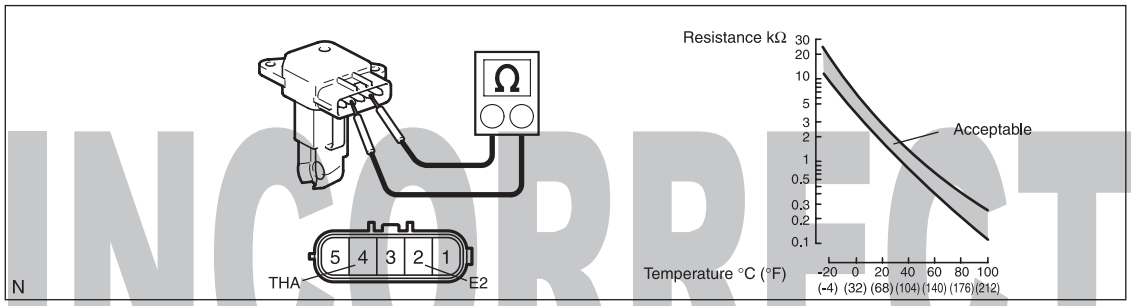
iii. Using a voltmeter, connect the positive (+) tester probe to terminal 3 (VG), and negative (-) tester probe to terminal 2 (E2G).

iv. Blow air into the MAF meter, and check that the voltage fluctuates.
If the result is not as specified, replace the MAF meter.

v. Reinstall the MAF meter with the 2 screws and connect the MAF meter connector.



c. Check the IAT sensor.



i. Disconnect the MAF meter connector and remove the 2 screws and MAF meter.

ii. Measure the resistance between terminals 4 (THA) and 5 (E2).

Standard resistance:

Condition	Specified Condition
-20°C (14°F)	13.6 to 18.4 kΩ
20°C (68°F)	22.1 to 2.69 kΩ
60°C (14°F)	0.49 to 0.67 kΩ

If the result is not as specified, replace the MAF m

iii. Reinstall the MAF meter with the 2 screws and MAF meter connector.

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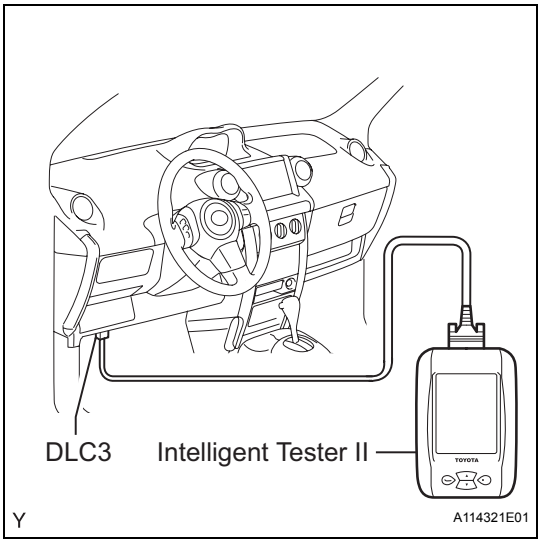
HINT:
The procedures above are the previous MAF meter inspection procedures. Please use the procedures below, which are the new MAF meter inspection procedures.

1. CHECK MASS AIR FLOW METER

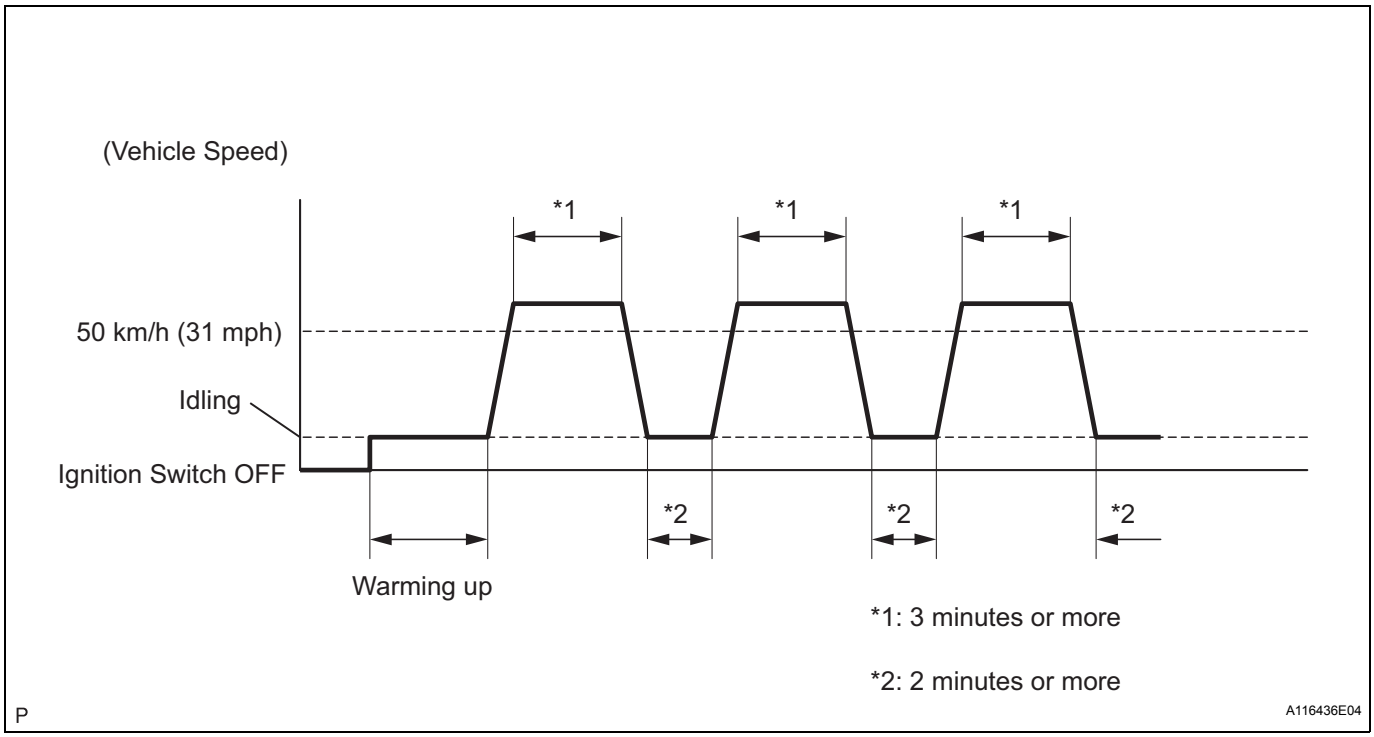
NOTICE:

- **Perform the MAF meter inspection according to the procedures below.**

- **Only replace the MAF meter when both the LONG FT#1 value and MAF value in the DATA LIST (with the engine stopped) are not within the normal operating range.**



(a) Perform confirmation driving pattern.
  (1) Connect the intelligent tester II to the DLC3.
  (2) Turn the ignition switch ON.
  (3) Turn the intelligent tester II ON.
  (4) Clear the DTCs (Refer to the repair manual of the vehicle you are servicing).
  (5) Start the engine and warm it up with all accessory switches OFF (until the engine coolant temperature is 75°C (167°F) or more).
  (6) Drive the vehicle at 50 km/h (31 mph) or more for 3 minutes or more *1.
  (7) Let the engine idle (accelerator pedal fully released) for 2 minutes or more *2.
  (8) Perform steps *1 and *2 at least 3 times.



(b) Read value using intelligent tester (LONG FT#1 and LONG FT#2).
HINT:
The "LONG FT#1" display is for in-line engines. For V-type engines, "LONG FT#1 (NO. 1 BANK)" and "LONG FT#2 (NO. 2 BANK)" are displayed.
(1) Enter the following menus: Powertrain / Engine and ECT / Data List / Long FT#1 and Long FT#2.
(2) Read the values displayed on the tester.
Standard value:
Within -15 to +15%
If the result is not within the standard value, perform inspection below.
HINT:
- "LONG FT#1" or "LONG FT#2" may change while idling and driving. Make a note of the maximum (or minimum) value.
- For V-type engines, if the value for either "LONG FT#1" or "LONG FT#2" is not within the standard value, perform the inspection below.

(c) Read value using intelligent tester II (MAF).
NOTICE:
- **Turn off the engine.**
- **Perform the inspection with the vehicle indoors and on a level surface.**
- **Perform the inspection of the MAF meter while it is installed to the air cleaner case (installed to the vehicle).**
- **During the test, do not use the exhaust air duct to perform suction on the exhaust pipe.**

(1) Turn the ignition switch to ACC.
(2) Turn the ignition switch ON (do not start the engine).
(3) Turn the intelligent tester II ON.
(4) Enter the following menus: Powertrain / Engine and ECT / Data List / MAF.
(5) Wait 30 seconds, and read the values on the intelligent tester.
Standard condition:
Less than the value shown under "Specified Condition"
If the result is not as specified below, replace the MAF meter.
If the result is within the specified range, inspect the cause of the extremely rich or lean air fuel ratio (Refer to the repair manual of the vehicle you are servicing).

LEXUS

Vehicle Model	Engine Type	Line-off (Start of Production)	Destination: North America VIN Number	Destination: Europe	Destination: Other	Specified Condition (g/sec.)
LS430	3UZ-FE	From August '00	○ From JTHBN30F110001075	-	-	0.66
		From August '00	-	○	○	
SC430	3UZ-FE	From February '01	○ From JTHFN48Y420001070	-	-	0.51
		From February '01	-	○	○	
GS430	3UZ-FE	From August '00	○ From JT8BL69S010002094	-	-	0.52
	3UZ-FE	From August '00	-	○	-	
	3UZ-FE	From January '05	○ From JTHBN96S065000064	-	-	0.50
	3UZ-FE	From January '05	-	-	○ Taiwan	
	3UZ-FE	From January '05	-	○	○ G.C.C.	0.57

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Vehicle Model	Engine Type	Line-off (Start of Production)	Destination: North America VIN Number	Destination: Europe	Destination: Other	Specified Condition (g/sec.)
GS300	3GR-FSE	From January '05	○ GRS190L: From JTHBH96S965000054 GRS195L: From JTHCH96SX60001019	-	-	0.64
	3GR-FSE	From January '05	-	-	○	
	3GR-FSE	From January '05	-	○	○ Australia, G.C.C., Ireland	0.59
	3GR-FE	From January '05	-	○	○ Australia, G.C.C.	
	2JZ-GE	From August '00 to August '05	-	○	-	0.49
	2JZ-GE	From August '00 to January'05	-	-	○ Australia, G.C.C.	
IS300	2JZ-GE	From May '01	○ From JTHBD192720033375	-	-	0.51
		From May '01	-	○	○ Australia	
RX330	3MZ-FE	From September '03 to January '06	○ MCU33L: From 2T2GA31U14C001003 MCU38L: From 2T2HA31U44C001002	-	-	0.54
	3MZ-FE	From January '03 to December '05	○ MCU33L: From JTJGA31U640001011 MCU38L: From JTJHA31UX40001081	-	-	
	3MZ-FE	From January '03 to December '05	-	-	○	
	3MZ-FE	From March '05	○ From JTJHW31U560001106	-	-	
	3MZ-FE	From March '05	-	○	-	
RX300	1MZ-FE	Until January '03	○ MCU10L: Until JTJGF10U730162618 MCU15L: Until JTJHF10U630313484	-	-	0.52
		From January '03 to December '05	-	○	-	