

# Changes in inspection method for mass air flow meter (MAF)

**Service bulletin number: TSB MD##**

**Release date: 2006.02**

## **Description**

New inspection method was recommended for DENSO made mass air flow meters. For HITACHI made mass air flow meters use the procedures provided previously.

## **Repair procedures**

### **Air flow meter inspection**

Use the inspection 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.

1. Carry out road test.
  - Connect the scanner to the DLC.
  - Turn ignition switch ON.
  - Switch scanner ON.
  - Erase trouble codes.
  - Start the engine and warm it up with all accessory switches OFF until the engine coolant temperature is 75°C or more.
  - Drive the vehicle at 50 km/h or more for 3 minutes or more.
  - Allow to idle for 2 minutes or more.
  - Perform two last steps at least 2 times more.
  
2. Read value using scanner (LONG FT#1 and LONG FT#2)  
Specified value: -15% - +15%
  
3. Read MAF sensor value using scanner.

#### *Notes:*

- *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.*
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- Turn ignition switch ACC.
  - Turn ignition switch ON (do not start the engine).
  - Switch scanner ON.
  - Read MAF sensor value using scanner.
- Specified value: .

Model	Name	Applicable years	Market	Note	Flow (g/s)
4Runner	-	1999.08-	EUR	5VZ-FE	0,41
4Runner	GRN21#	2002.11-	USA	1GR-FE	0,72
4Runner	-	2002.11-	EUR, GEN	1GR-FE	0,70