

Explains about the basic operation of the components.

Start of diagnosis procedure

Describes inspection procedure.

MULTIPOINT FUEL INJECTION (MFI) TROUBLESHOOTING

Explains about technical details.

Describes the conditions for that diagnosis code being set.

Describes possible causes(s) for that diagnosis code.

OPERATION

- Power is supplied to the air flow sensor (terminal No. 4) from the engine control relay (terminal No. 1) and earthed to the engine-ECU (terminal No. 40) from the air flow sensor (terminal No. 5).
- A power voltage of 5 V is applied to the air flow sensor output terminal (terminal No. 3) from the engine-ECU (terminal No. 90).
- An air flow sensor filter reset signal is inputted to the air flow sensor (terminal No. 7) from the engine-ECU (terminal No. 19).

FUNCTION

- Air flow sensor outputs a pulse signal proportional to the intake air flow rate.
- The engine-ECU determines the basic injection timing of the injector using the pulse signal output from the air flow sensor and the engine speed signal.
- When the throttle position sensor output is low, the engine-ECU causes the power transistor in the unit to be ON to send an air flow sensor filter reset signal to the air flow sensor. In response to the reset signal, the air flow sensor resets the filter circuit to improve the ability of the air flow sensor to measure the air flow rate in the area where the intake air flow rate is low.

TROUBLE JUDGMENT

Check Condition

- Engine speed is 500 r/min or more.

Judgment Criterion

- Sensor output frequency of 3.3 Hz or less for 2 seconds.

PROBABLE CAUSE

- Failed air flow sensor
- Open/short circuit in air flow sensor circuit or loose connector contact
- Failed engine-ECU

DIAGNOSIS PROCEDURE

STEP 1. MUT-II data list

- Refer to Data list reference table
M1131152000735P.13A-288.
 - a. Item 12: Air flow sensor

Q: Is the check result normal?

- YES :** Intermittent malfunction (Refer to GROUP 00 – How to Use Troubleshooting/ Inspection Service Points M1001000200429).
- NO :** Go to Step 2 M1131750100051s2.

STEP 2. Connector check: B-08 air flow sensor connector

Q: Is the check result normal?

- YES :** Go to Step 3 M1131750100051s3.
- NO :** Repair.