



Sedan Range

DATE 02/01

05.1-36

SERVICE

TECHNICAL BULLETIN

Rough Idle/Drivability – Diagnosis to Follow Prior To Replacing MAF

MODEL 1995-97 MY Sedan (4.0L) Range VIN 720001-812255

ISSUE:

Some 1995-97 MY Sedan (4.0L) Range vehicles may experience concerns of poor idle quality, hesitation and other drivability concerns. The Mass Air Flow Sensor (MAFS) is sometimes replaced in an attempt to repair this concern. However, the MAFS have been tested and found to be fault free. As a result, this Technical Bulletin has been issued to offer alternatives to replacing the MAFS.

GENERAL INFORMATION

The AJ16 engine has been tuned for maximum power with the best possible fuel consumption to meet the stringent emission regulations for the North American market. Due to individual driving patterns, along with the engine design characteristics, the occasional idle dip can occur. This is considered normal. However, should a customer complain of poor idle quality (and in comparison to other vehicles seems to be worse) or any other drivability concerns, the following information should be followed rather than replacing the MAFS.

Note: On early 1995 MY vehicles with low mileage, MAFS were replaced due a known build issue by the supplier. This issue was limited to a specific build range of parts and was corrected on all components produced after that date range. Therefore, this is no longer an issue as a potential root cause.

ACTION:

In case of a customer complaint of poor idle quality on a 1995-97 MY Sedan (4.0L) Range vehicle, check the following alternatives to replacing the MAFS:

- 1. Using the Portable Diagnostic Unit (PDU) or World Diagnostic System (WDS), check for relevant Diagnostic Trouble codes in the Engine Control Module (ECM). If DTCs P0101, P0102 and P0103 are stored and diagnosis confirms a faulty MAFS, only then should the MAFS be replaced.
2. Identify and ensure that the correct fuel injectors are installed:

Table with 6 columns: Engine, Part No., Prod. Color, Service Color, Supplier Production Reference, Supplier Service Reference. Rows include NA DBC 10423 White Green D3156KA D3156AA and SC DBC 11041 Red Green D3165KA D3165AA.



3. Check that the spark plugs are the correct type for the vehicle, are clean and have the correct gap set. (See table below for correct spark plug)

| Description | Part Number | Spark Plug Designation | Gap Size |
|-------------|-------------|------------------------|----------------|
| Champion | EBC 8143 | RC12YCC | .038" (0.96mm) |

4. Check the camshaft timing changes (refer to TSB 03.1 – 05).
5. For poor idle quality (AJ16 SC Engine), refer to TSB 03.1 – 10.
6. Check that the EGR valve is operating correctly (refer to TSB 05.1 – 26).

Note: The EGR valve will only need replacing if the relevant DTCs are stored in the ECM memory.

Should any of the above not rectify any case of poor idle quality, the Mechanical Fault Diagnosis information in section 3 of the AJ16 Service Manual should be followed. On JTIS, select 1995 XJ6/XJ12, under General Information, select 101-02 Diagnosis & Testing, section 3.2 Diagnostic Procedures.

For poor idle quality and other drivability concerns, using the PDU or WDS, check the long-term and short-term fuel trims. If any are found to be high, check for air (vacuum) leaks and for the general fuel pressure being too high. The PDU or WDS can be used to re-set the ECM adaptations (refer to TSB 05.1 – 31) after rectification work has been carried out.

Note: If a customer complains of any other drivability concerns, check that the throttle body and butterfly are clean from carbon deposits and that the engine breather modification has been carried out (refer to TSB 03.1 – 15).

If the problem persists, contact the Technical Hotline for further information with a list of any rectification work that has already taken place.

WARRANTY INFORMATION:

This Technical Bulletin is for information only.