Important!

Please give copies to all your VW Technicians

Technical Bulletin

Subject: **Poor Throttle Response**

Group: **23**

Number: **03–01**

Model(s): **Golf, Jetta, Jetta Wagon, New Beetle with 1.9L TDI (Eng. code ALH)** **1998 ➤ 2003**

Date: **Apr. 2, 2003**

Condition

Poor throttle response on 1.9L TDI equipped vehicle.

Service

Note:

Perform Steps 1 through 9 and If any of those steps reveals a problem:

– Repair or adjust as necessary and then road test to determine if the customer concern has been eliminated prior to continuing with step 10.

Note:

All steps should be documented using VAS 5051/ 5052 printouts.

1. - Check (Engine Control Module) ECM ground connection (see page 2).
2. - Check Injection pump timing (see page - 2).
3. - Check snow screen (if applicable) at intake air duct (see page - 2).
4. - Check vacuum hoses (see page - 2).
5. - Check EGR valve and intake manifold air flap (integrated in EGR valve) (see page - 3).
6. - Check MAF sensor and EGR valve including solenoid valve (see page - 4).
7. - Check crankcase ventilation system (see page - 5).
8. - Check engine oil level (see page - 5).
9. - Check fuel quality (see page - 5).

1. - ECM ground connection, checking

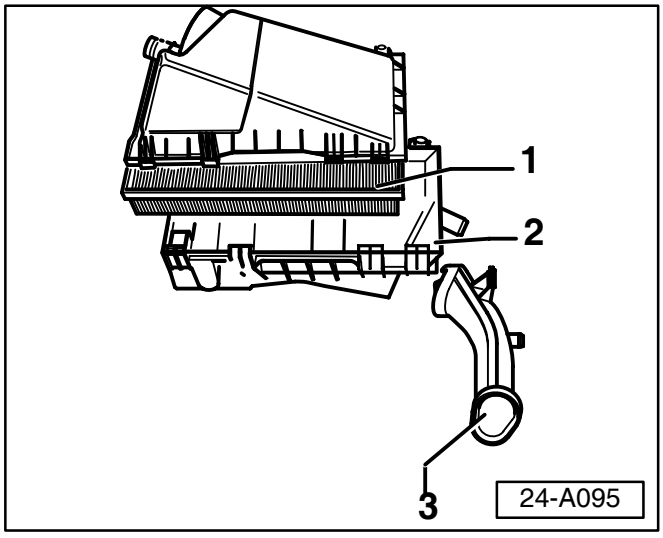
– Inspect ECM ground (GND) connection for corrosion, poor or no connection.

2. - Injection pump timing, checking

– Check Start of injection pump timing see Repair Manual, Group 23 – *Diesel Fuel Injection*, “Start of injection, dynamically checking and adjusting”.

Note:

It is advised to adjust to the upper range .



3. - Snow screen (if applicable) at intake air duct, checking

◄ – Check snow screen (located below left front fender in air duct -3-) and clean as necessary.

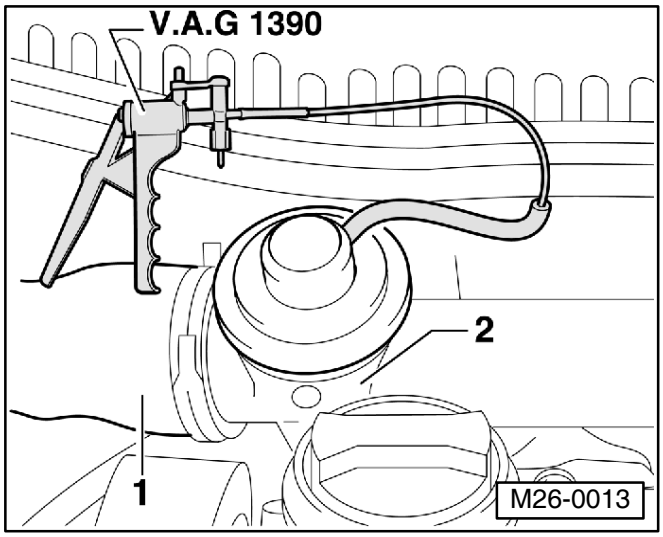
– Inspect air cleaner element -1- for proper installation.

If air cleaner element is deformed due to improper installation this may cause MAF sensor to fail.

– Replace as necessary.

4. - Vacuum hoses:

– Check integrity of all vacuum hoses and connections, repair as needed.

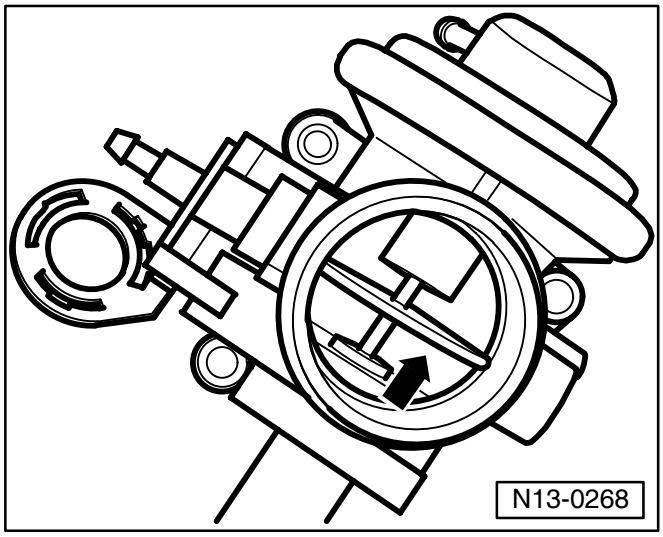


5. - EGR valve and intake manifold air flap (integrated in EGR valve), checking:

◄ – Remove intake hose -1- at EGR valve.

– Remove vacuum hose from EGR valve.

– Connect hand vacuum pump V.A.G 1390 to EGR valve.



◄ – Apply vacuum and make sure air flap (arrow) opens and closes freely.

If flap does not open and close freely:

– Replace EGR valve/flap.

6. - MAF sensor and EGR valve including solenoid valve, checking

– Check correct function of MAF sensor and EGR valve including solenoid valve (see Repair Manual for procedure and operation ranges).

Note:

Since both systems work closely together, one system malfunctions it will directly affect the function of the other, therefore, it is important to follow procedure thoroughly.

– In addition, the MAF sensor must be full load tested, see “Evaluating measuring value blocks at full load” in Repair Manual Repair G*roup 01 - On Board Diagnostic (OBD).*

If MAF sensor readings are out of tolerance (even if no MIL light or DTC exists):

Before replacing any parts (MAF sensor G70, EGR solenoid valve N18):

Ensure wiring is OK and electrical connections are clean and functioning properly.

If wiring is OK electrical connections are clean and functioning properly:

– Replace MAF sensor.

If MAF sensor (G70) failed full load test and after replacement of MAF sensor, full load value still cannot be attained,

– Check turbo charger (consult Repair Manual).

7. - Crankcase ventilation system, checking

– Inspect and ensure it is working to OEM specifications.

8. - Engine oil level, checking

– Check and adjust to proper level if necessary (DO NOT overfill).

9. - Fuel quality, checking:

– If condition occurred suddenly, there may be a fuel quality issue.

if fuel is suspected to be of poor quality.

– Drain and refill fuel with known good quality fuel.

10. - Carbon build-up, checking

In most cases performing steps 1through 9 will restore throttle response, however, in some isolated cases, if all previous items are functioning according to specifications and the vehicle still has poor throttle response; it may be necessary to physically inspect the EGR valve and intake manifold as there (in higher mileage vehicles) may be excessive carbon build-up (greater than 10 mm) in the intake manifold and/or EGR valve.

Note:

While some carbon build-up is is normal and is not a concern, excessive carbon build-up (greater than 10 mm) is related to fuel quality, and soft driving behavior (operation at low speeds, short distance driving, under extremely cold and damp operating conditions).

To inspect for carbon build-up:

– Remove Exhaust Gas Recirculation (EGR) valve and inspect and record depth of carbon in the valve and intake manifold.

Normally carbon build-up is not a concern, a problem may occur only if it is excessive (greater than 10 mm).

If the carbon layer in EGR valve and/or intake manifold is greater than 10 mm (clogged to more than 50% - 60%):

– Replace EGR valve and/or intake manifold.

If the EGR cooler is clogged more than 50% - 60% in its flow area:

– Replace EGR cooler.

If new parts are not available, or if it is more economical, the intake manifold and EGR cooler can be cleaned (see Note below).

Note:

Prior to cleaning, the intake manifold and EGR cooler MUST be removed from the engine (to ensure no carbon particles enter the engine).

– Report each case to your VW field representative, they will require all relevant information pertaining to the repair including any printouts made.

When procedure applies to vehicles within the New Vehicle Limited Warranty, use the following:	
Part Identifier:	**2639**
Labor Operation:	**Use appropriate labor operation(s) for repair(s) performed.**
Claim Comment: Type “As Per Technical Bulletin V230301” in comment section of Warranty claim.	