Overheating Micra and a Golf with DTC 17656

Some recent posts from the Eure!Car Tech Blog on an overheating and weak Micra, and a fault code on a VW Golf IV. The Eure!Car Tech Blog, which is updated regularly, helps with everyday technical problems and can be read at www.euretechblog.ie and euretechblog.com.

Nissan Micra II & Cube
Engine overheats and loses power

There are problems with the flywheels fitted in some Micra II models that can produce the symptoms above.The causes of which may be difficult to determine.

Symptoms

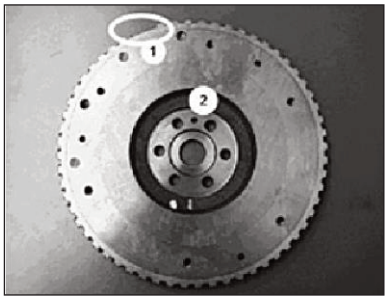
The following exhibited symptoms may be present:

- Incorrect ignition advance
- Power loss
- Engine overheating
- Engine seizure

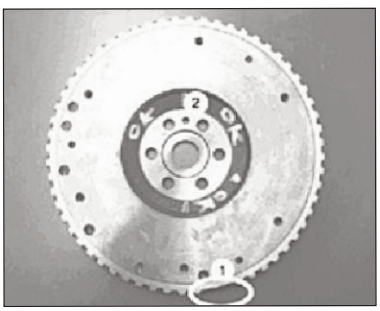
Checks

These symptoms could bring to mind a diagnostic with numerous possibilities, but here we are going to focus on the flywheel being responsible for the symptoms.

Check that the engine has a coil control system and RPM sensor in a single assembly. Carry out a reading of the ignition peaks in the integrated RPM sensor with an oscilloscope to determine that the synchronisation with the camshaft sensor is correct.



Flywheel teeth in the wrong position



Flywheel teeth in the correct position

Check the synchronisation of the crankshaft RPM sensor with the camshaft sensor using a scope. Connect channel 1 of the scope to the camshaft sensor signal (CH1-> C1 or CH1->on pin 2 of the component) and channel 2 to the RPM signal sensor signal (CH2-> B3 or CH2->on pin 1 of the component)

The image of the signal shows us that the camshaft is operating out of range, an incorrect synchronisation is seen between them during the starting phase. The signal will vary depending on the origin of the fault.

Solution

If there is a problem with the synchronisation, the necessary components must be removed to access the flywheel and replace it.

In the top image, you can see the correct position of the teeth with respect to the shaft by comparing it with the image on the bottom

VW Golf IV (1J5)
Fault Code 17656

Eure!Car has confirmed the solution to a fault that affects the Volkswagen GOLF IV (1J5) with 1.9 TDi engine that records a DTC of 17656 (Injection Start Control Deviation). This code is accompanied by various symptoms in the vehicle's engine performance.

Symptoms

Below are detailed all the symptoms that appear:

- DTC17656 - Start of injection timing regulation. Regulation incorrect. Cylinder 1, 2, 3 or 4. Regulation limits exceeded or below.
- Lack of engine power
- Engine malfunctioning
- Difficulty when starting the engine
- Malfunction indicator lamp (MIL) on

Cause

The following causes may be responsible for these symptoms to occur:

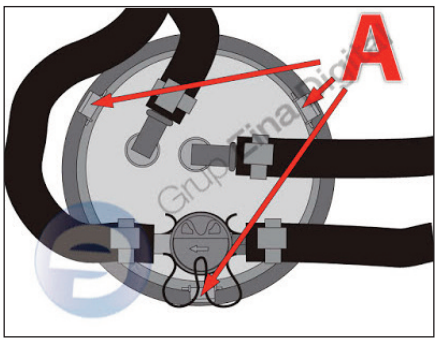
- Service interval has been exceeded
- Dirt in the fuel tank may have clogged the fuel filter

Solution

The solution that Eure!Car has successfully carried out is as follows:

- Read the fault codes in the ECU
- Confirm the DTC of 17656
- Check that there is fuel in the tank
- Ask the customer if they have filled up with a suitable fuel.
- Check for leaks in the fuel supply circuit
- Check for fuel impurities and quality
- Replace the fuel filter
- Clear the fault code in the ECU

To be able to extract the fuel gauge correctly, the clips that secure it must be removed with great care. There are three securing clip positions for the fuel gauge which are located as shown in the image below.



Although the replacement of the fuel filter has prevented the majority of repetitions of this incident in our experience, it is possible that the fault is due to another component, depending on the symptoms and type of vehicle.

For more answers to technical problems logon to www.euretechblog.ie and www.euretechblog.com.