

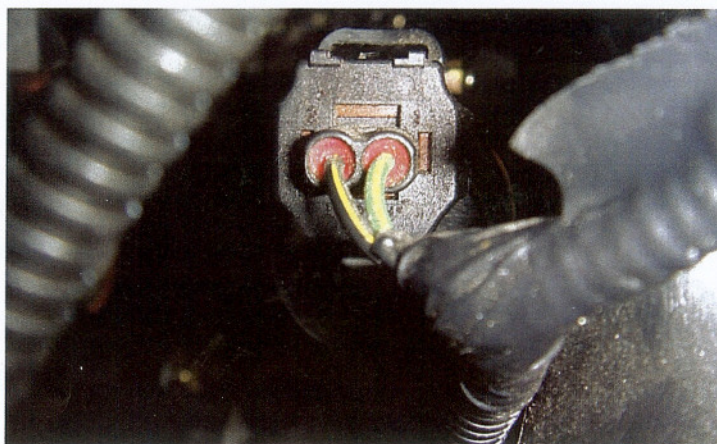
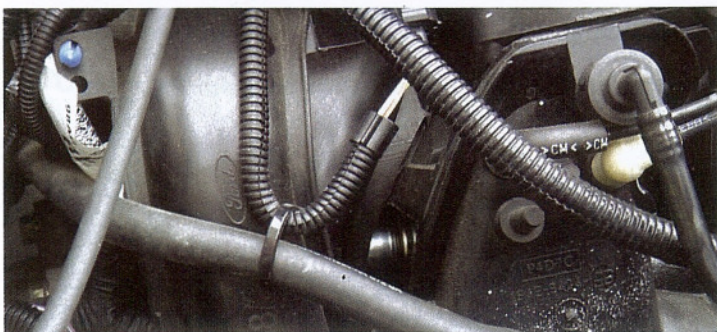
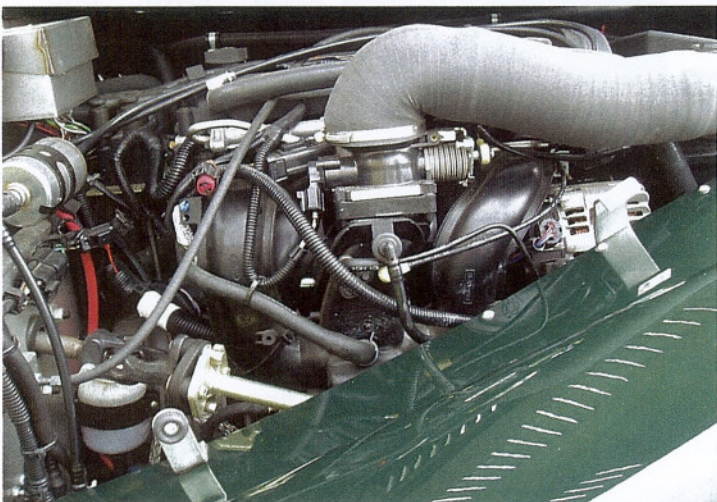
A Solution to the 4/4 Zetec "Rev Hanging" Problem

After 17,500 miles of trouble free motoring since buying a new 1.8 Black Top Zetec 4/4 in July 2004 who am I to complain. Complain, no. Niggles, yes. Since day one I had noticed when driven at power the revs hung while changing gears up and down the box. The more power called for, the longer the revs hung. Revving the engine on the driveway gave no indication to what may be causing the problem. The revs responded, in comparison, like any other car would. Within the first few weeks of driving the Zetec one soon adapts and what seems to follow is an acceptance of 'what is'. That is until late last year. On the MSCC forum, Mogtalk, a thread appeared on the subject of Zetec rev hanging.

The response from members of the MSCC Mogtalk forum gave me the feeling I was not on my own. What transpired through 'trial and error', Morgan Austria, had set themselves a target to find a cheap solution to the Zetec rev hanging problem without changing anything on the ECU and/or Electronic system. They had found a solution in the form of a 'distance plate'. I was in no rush buy my plate, wanting to see how others rated this new found solution by Morgan Austria. I store my 4/4 over the winter months and began to ready her for the road late March. I had seen no new threads appear on Mogtalk regarding the Zetec rev hang so I decided to post a thread myself asking how many Zetec owners had fitted the distance plate and was it a worthwhile modification. I only had 1 positive reply to my thread and one of an offer of a spare distance plate. I took up the offer and decided to investigate further.

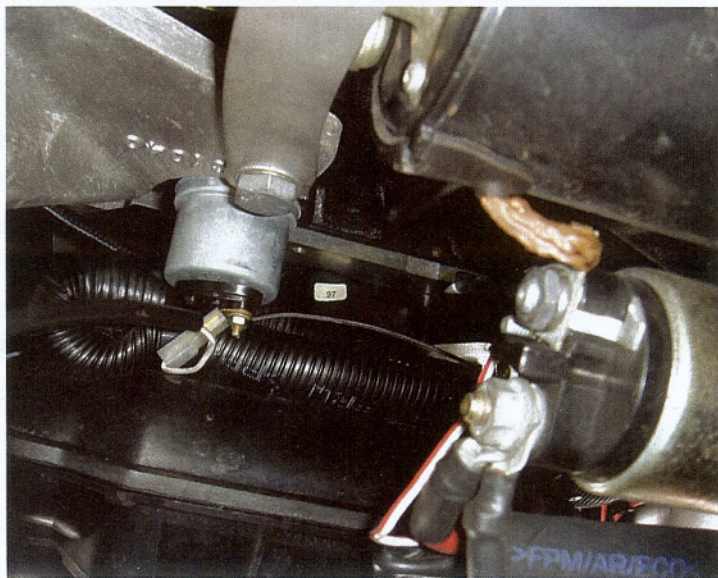
The distance plate arrived along with the instructions from Peter Brown, a mogtalker who offered me his spare he had bought from Morgan Austria last year. I began by following the instructions on how to install it.

1. Disconnect the air flow meter leads, which you will find at the back of the intake manifold. (right hand side of the engine.)



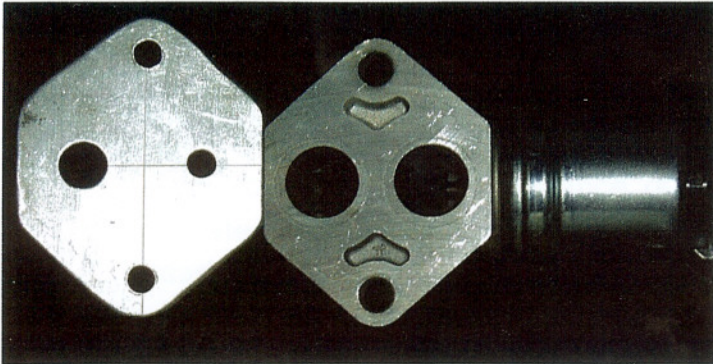
Shown in the photos is the Idle Speed Control Valve (ISCV) (sometimes described by Morganers as "Air Flow Meter"). Not easily identifiable of the components positioned behind the air intake manifold, but the three pictures in line above will help in the identification of the ISCV location. Once identified the EMU/ISCV connector can be found and disconnected.

2. Jack the 4/4 and (undo the oil filter, optional, refit if required and top up the engine with oil after step 5), then you have free access to the air flow meter.



Care must be taken when jacking the 4/4 to gain sufficient working space. Be aware that at the rear of the 4/4 jacking too high for more access may foul or even damage the exhaust. Looking up behind the intake manifold I found my Mog to have a large wiring loom conduit stored behind it, inhibiting the ISCV from any view. The ISCV could be reached by hand but only with great difficulty. I was left with 2 options, to continue by removing the conduit or take the Mog to the local Ford or Morgan dealership. I like to feel I can finish what I start but in this case I took the second option of going to my local Ford dealership to have the restrictor plate fitted.

3. Undo the upper and lower bolts and remove the ISCV.



The photo above shows on the left the Morgan Austrian distance plate side by side with the ISCV removed from the air inlet manifold.

4. Clean all surfaces and put the distance plate between the intake manifold and the ISCV. The position of the holes of the distance plate (small and bigger one) has no influence when fitted.

Careful inspection of the ISCV shows 2 x "O" ring marks around the inlet and outlet apertures. Ensure the "O" rings are still in position when refitting the distance plate + ISCV.

5. Tighten the ISCV properly.
6. Reconnect the ISCV leads.
7. Start the engine. For the first time keep it running until the electronic choke is switched off automatically and the engine is running on idle speed ~800 RPM. Start to rev the engine. The rev counter should not hang above 3000 RPM any more.
8. Take the Zetec 4/4 out for a test drive.

On a more personal note I took the easy option of having the distance piece fitted by my local Ford dealership, time taken 25 minutes at a cost of £28.67 incl VAT and would recommend that the work is not a 'DIY on the driveway' option. For those who have the skills and equipment then progress as I did and should the ISCV be visible from beneath the Mog then continue on to a conclusion.

The distance plates are obtainable from Morgan Austria, just email office@morgan.at and write "Zetec distance plate" in the subject header. You can also write to Morgan Austria, Koessler-Hammerschmid, A-2521 Trumau, Trubstrasse 2. Current details and information will be sent to you. The approximate cost of the plate including delivery is £20 to £25 to be paid in euros.

Is the modification worthwhile, the answer is a resounding yes. I can also echo the comments made by another Mogtalker ... "I used the adapter plate on my Zetec 4/4, it was one of the best mods done on the car. It had no side effects whatsoever." Performance is not affected and 40.03 MPG achieved on test.

Bryan Hobson [MSCC 11578]

Addendum – Keith Hofgartner [MSCC 14089]

I thought it useful to add my comments on the experience I have had in fitting this modification.

Firstly, I struggled to locate the valve, maybe it is me but I thought the description suggested it was on the crankcase but to confirm it is mounted on the inside of the Inlet Manifold facing out of the engine bay. I did jack the front of the car high as described and it was difficult to gain access to the valve as the Factory had managed to 'loop' surplus wiring loom into this space. By pushing the loop up I was able to get an 8mm spanner on the bolts. These are screwed into the plastic manifold and so do not need a great deal of force to undo them and feel that was unnecessary if you can use the following approach.

I elected an approach from the top standing over the engine.

First remove the clip that holds the loom by the fuel rail and lift to allow access with your hand holding the mini 8mm socket (a model aircraft removal glow plug tool is an ideal choice and available for a couple of pound from on-line model shops) and to CAREFULLY remove the bolts. As the valve is already disconnected (from previous notes) extract and clean the face. Ensuring the 'O' ring gasket is still in place in the manifold.

Place the Modification Plate on the valve (I elected to use a small amount of high-temp sealer to mate the plate to the valve to ensure no leaks – there is no mention of this in the original notes but felt it would be worthwhile) and replace and secure bolts.

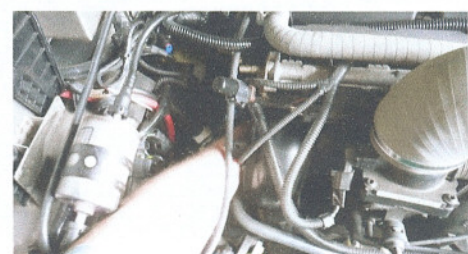
Replace connectors and loom clips and continue to start the engine as described in the original notes.



Remove loom clip to allow movement of loom



Model Aircraft Glow Plug Spanner is ideal!



If you have slim wrists this may be easier!