

## Idling Problems?

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You will need

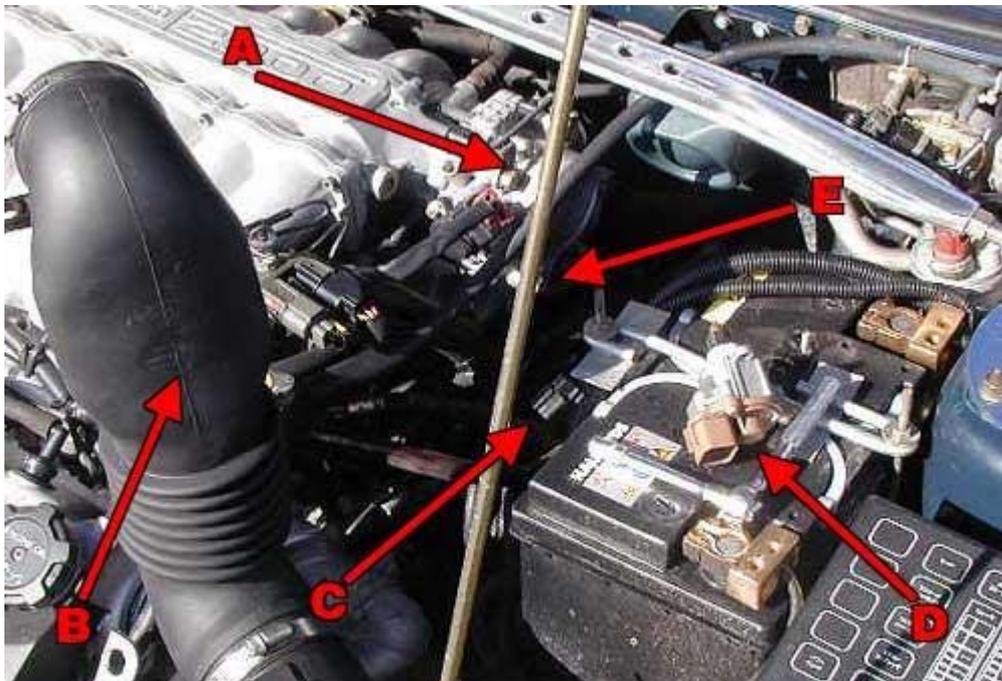
- Socket set
- Scredriver
- WD40
- Possible replacement stepper motor

This is most probably the idle speed controller or ISC (a stepper motor). Its situated just below the air intake on the throttle body (follow the large black pipe from the air filter to the engine - loosen the jubilee clips at both ends and pull the pipe off the throttle body - note the small rubber pipe connection to the inlet manifold - and twist the whole pipe vertical).

The ISC motor can now be seen - older ones have a light brown plastic casing on the back. It's held on by two small bolts and has a six pin plug connection from the ECU. Once removed you'll see the funny looking plunger that moves in/out of the throttle body. Try cleaning the outside of the plunger with WD40. Check for damaged or broken wires on the plug. Clean the inside of the throttle body housing. Refit and see if things have improved. (If not you can try cleaning the inside of the motor - but mine was spotless).

If its an intermittent fault it's liable to be a dodgy wire or sticky mechanism. If it (like mine) gives consistently certain idling characteristics, it will need replacing.

My symptoms were: easy starting when cold. As the car warms the idle speed hunt's and when the cars hot, the engine continually stalls at idle.



- A: Throttle Body
- B: Air Pipe (moved up out of the way)
- C: Connector to ECU from Stepper Motor (disconnected)
- D: Stepper Motor (removed)
- E: This is where the Motor connects to the block

### Testing it

There is a loose wire with a brown 'dongle' on the end of it situated on the bulkhead behind the throttle body (mine was near the windscreen wiper motor) You could try connecting this to earth with the ignition on and seeing if the stepper motor runs to its end stop position, **but I've no idea if this will work** (earthing

the wire tells the ECU to move the stepper motor to its reset or hot running position)

As a temporary measure you can refit the ISC, get the car hot and then unplug it. Adjust the idle speed with the screw on the top of the throttle body (normally under a rubber grommet) to get a satisfactory hot idle speed. Your car may be hard to start when cold but will be OK hot.

### Replacing it?

Best to swap it with a friends working one before you spend good money. Getting a second hand one is hard as usually all the FTO breakers have none left or are asking silly money. New from Mitsi they are about £300. (Part No. MD628054 - 1995GR) Kempy's in New Zealand are selling reconditioned units for about £75 + postage. My new one was a completely different design from the original - so perhaps it won't fail again?

