Adjusting the HE TPS.

This adjustment is required for the Jaguar V12 5.3ltr HE engine to perform as designed, and sadly “near enough is simply not good enough”.

Firstly, remove the throttle cable, and the 2 crossrods. Undo the 4 X 11mm nuts and remove them and the washers, and the micro switch with its bracket.
Lift off the throttle capstan assembly, and invert it. The TPS is the plastic looking thing held in place with 3 small screws.

It must remain plugged into the cars wiring loom, as you will need the 5volts the ECU supplies to set this item.

You will need a DVM (Digital Volt Meter) for this task. An old style Analog meter will NOT do here.

You will be probing the Red and Yellow wires, as in the colours that are associated with the TPS pigtail lead, NOT the colours of the chassis loom.

Insert the probes as best you can imagine. I usually separate that plug a SMALL amount, and that gives easy access to the connector metal bits that will enable the meter to get a reading. Others simply push the pointy bit of the probe into the rubber until contact is made.

Set the DVM on a LOW voltage DC. Mine has 5V, others may have different low end scales.

Turn ON the ignition, do not start the engine, not required for this.

You should see a volt reading of 0.34??. You are aiming for 0.32 – 0.36V.

If you have this, congratulations, all is fine, but I bet you don’t.

Loosen those 3 screws, NOT by much, just sufficient to allow the TPS to rotate. Now SLOWLY rotate the TPS until that required reading is achieved. This is fiddly, time consuming, frustrating, but it is possible, and MUST be done. I use a SMALL tack hammer, and extremely carefully “tap” the TPS a few thousands of an inch at a time, until the meter reads what I want. Obviously I do not loosen those screws very

much at all, and it is a feel thing. I aim for 0.34V, and have never had one that does not set correctly in the many I have done.

Once set, firmly tighten the screws, re-invert the TPS, and SLOWLY open the throttle, and take very careful note of the steady rise in volts as you do this. It will end up at about 5V at full throttle, or close to that. That full throttle reading is of no importance in the engines ability to achieve full revs, trust me. Any fluctuations as this opening is taking place indicates a dead spot in the TPS and it MUST be replaced. That is a separated write up I have available.

I have an “old school” analogue meter for this idle to full throttle test, as the needle swing is easy to see, as most DVM’s has a large amount of “damping” that can confuse the issue.

Once satisfied, retighten the 3 screws. No need to be stupid tight, just firm is OK. Refit the capstan, micro switch, and 4 washers and nuts. Tighten the 4 nuts, again, not stupid tight. Now look at that meter again, and ensure it is still on the voltage you set it at. If it is, continue with the crossrods, and readjust them. Also a separate write up available.

If the readings have changed, and are outside the required voltage, remove that capstan and start again, it’s that simple.

Once done, start the engine and enjoy the sound of a properly set V12 engine.