

054

Model: Various

Make: Various

Subject: Air flow meter pin outs

Injectronics receives many calls on how to test air flow meters. Usually these items are trouble free and don't 'go' out of calibration unless the top has been removed and someone has adjusted the spring tension.

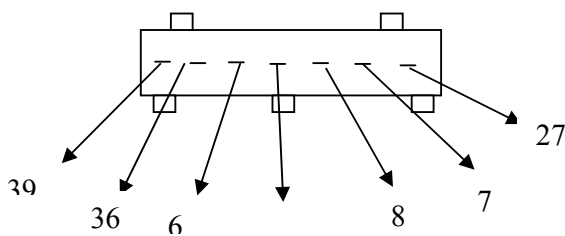
Some common problems are:

1. No output voltage
2. Intermittent output voltage –(worn circuit board)
3. Flat spots from binding flap or bearing
4. Calibration problems (Tampered with)

Injectronics can test and recalibrate Air flow meters using our computer operated Air flow test bench, however some quick basic tests that can be performed are:

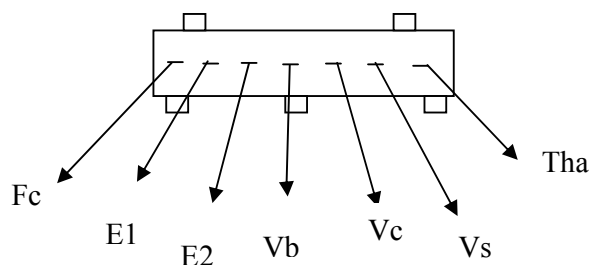
- a) Check for binding flap throughout the full range
- b) Check there is an output voltage and that it increases at a steady rate as the flap is moved open (note: some systems decrease voltage as the flap opens). On some Bosch LE systems the tachometric relay will need to be bridged out to supply power to the Air flow meter
- c) If there is no output voltage, check the supply and earth's to the Air flow meter.

Some plug and wiring configurations are shown below



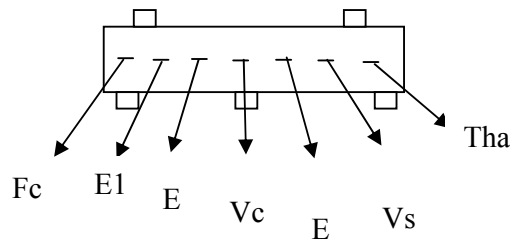
Early Bosch 7 pin

39,36 pump contacts
6 earth
9 supply in
8 reference voltage – approx 4v lower than supply
6 load/output signal
27 air temp sensor



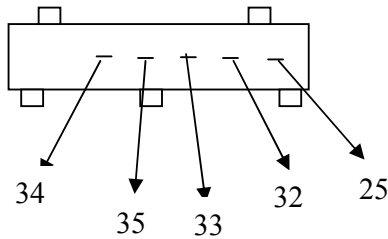
Nippon denso (Toyota/Mazda)

Fc,E1 pump contacts
E1,E2 earth
Vc reference voltage – approx 4v than supply
Vb supply voltage
Vs load/output signal
Tha air temp sensor



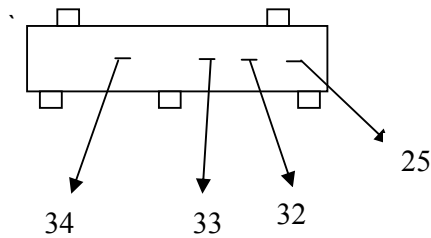
Nippon denso 2 (Toyota/Mazda) note: some start with a high voltage and go lower

Fc,E1 pump contacts
E earth
Vc reference voltage
Vb supply voltage
Vs load/output signal
Tha air temp sensor



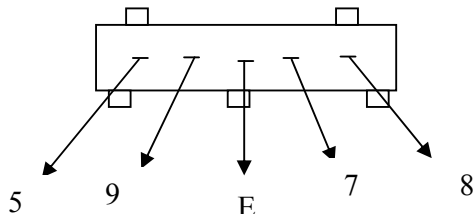
Jecs 1 (Nissan/Subaru)

34 earth
35 12v supply
33 reference voltage –approx 4v lower than supply
32 loaded output signal
25 temp



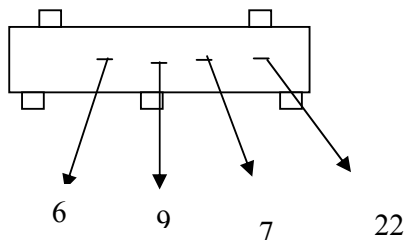
Jecs 2 (Nissan – N12 Turbo , some 280zx)

25 air temp
32 load/output signal
33 earth
34 8v power supply



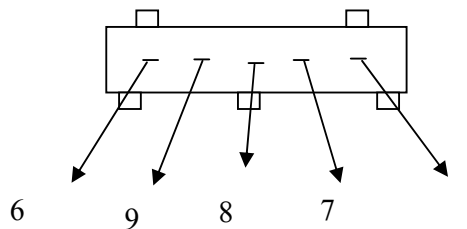
Bosch LE 5 pin

5 earth
9 supply
E not used
7 load/output signal
8 reference voltage (approx 4v lower than supply)



Bosch digital (also xf ford)

6 earth
9 supply in 5 v
7 load/output signal
22 air temp sensor



Bosch (Pintara)

6 earth
9 supply in
8 reference voltage
7 load/output signal
27air temp sensor