



Fig.3: this flow chart diagram shows the PIT module functions.

activated by the vacuum actuator; ie, the standard diaphragm unit fitted to older distributors.

When the manifold vacuum is high, S1 is held open and RA4 is pulled high via resistor R8. Conversely, when the manifold vacuum is low, as when the accelerator is wide open, S1 is closed and RA4 is pulled low and this causes the PIC to retard the ignition timing.

The 7-segment LED display is driven from IC2, a 74HC164 serial to parallel shift register. This receives serial data from pin 17 (RA0) of the PIC and it is clocked from pin 18

(RA1). It's parallel data output drives the 7-segment display to indicate such things as errors, programmable system variables and which set of data will be used.

IC3 is an MC34064 undervoltage sensing circuit and it is used to ensure that the PIC resets reliably each time the ignition is turned on.

An 8MHz crystal, in conjunction with C6, C7 and R4, sets the clock speed for the PIC, while LED1 is driven from pin 13 (RB7) to provide trigger pulse status. This LED will be on when RA2 (pin 1) is low and off when RA2 is high.

The power supply uses a series diode (D1) for reverse polarity protection, a zener diode (ZD1) to clip any large voltage spikes and a 5V 3-terminal regulator (REG1). The latter supplies the 5V rail for the ICs and to the MC3334P on the HEI PC board.

There can be quite a lot of interference coming from the engine bay via the wires connecting to the input and output pins on the PIC. Diodes D2-D7 together with resistors R17 to R19 and capacitors C8-C10 help shunt this interference back to the power supply. The IN5819 diodes specified are Schottky types and have a lower turn-