

Fig. 7 - 1985 model year TCCS ECU block diagram

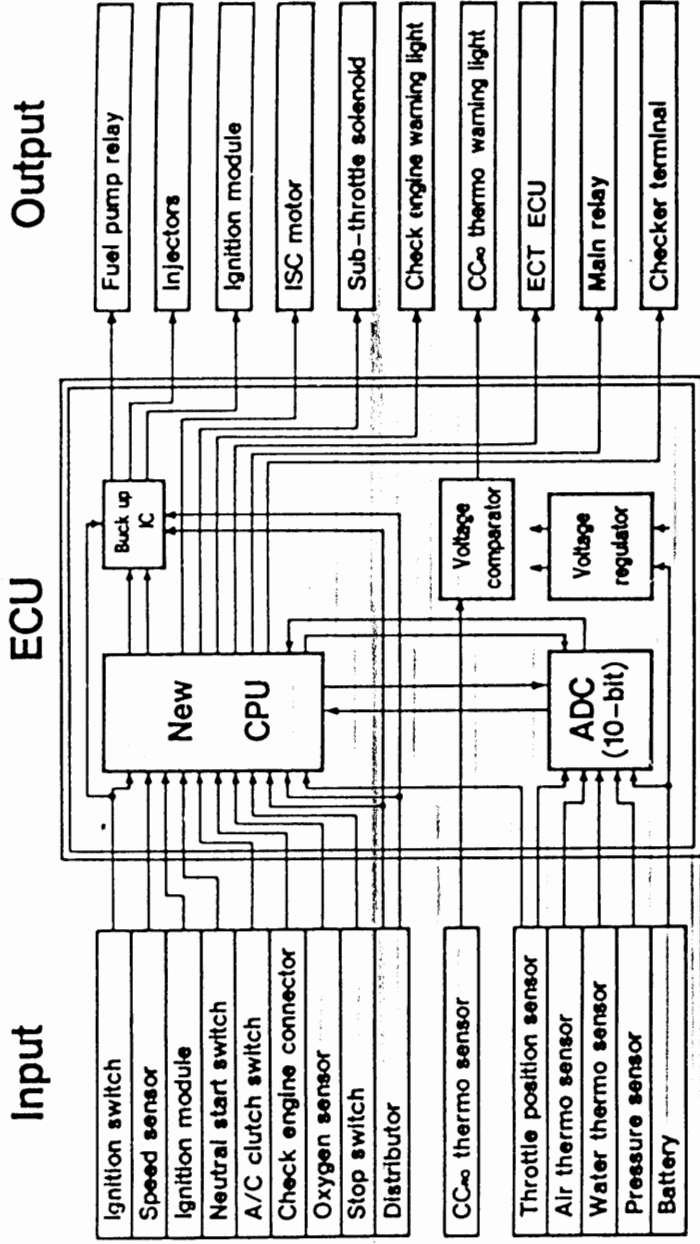


Fig. 8 - Another TCCS ECU block diagram (Speed density system)

MICROCOMPUTER FEATURES

Microprocessor Unit

Figure 9 shows a block diagram of the CPU. The nucleus of the CPU is the unit which processes 8/16-bit data. To obtain a high speed operation the pipeline method has been adopted, and it processes data and fetches operation code in parallel. With the 12 MHz crystal oscillator, which is used conventionally, one machine cycle is 500 nsec and the minimum instruction time is

500 nsec. The internal registers consist of a pair of 8-bit accumulators (A; B), a 6-bit condition code register (CCR), a pair of index registers (X; Y), a stack pointer register (SP), and a program counter (PC). Accumulators A and B may be combined together as one double-byte-length accumulator. In addition, index register Y, equipped with an automatic increment function, may be used as an indirect register to handle table data. Figure 10 shows the CPU internal registers.