

Information and Control Systems (TIACS)

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ABSTRACT

Electronic sub-systems are being developed for heavy duty trucks. However, these sub-systems are being developed as individual entities; i.e., information, monitoring, recording, control systems etc. This paper identifies the current, near term, and long range system requirements and suggests ideas for a fully integrated Truck Information And Control System (TIACS) aimed at an orderly approach to a vehicle electronic system

commercial vehicles in all phases of its life including; manufacturing in the basic product or as a part of fleet operations is no longer a debate of "if" but "how fast" it will happen. The earlier setbacks experienced with electronic skid controls in the early 70's are now behind us with the industry moving forward with cost effective and reliable electronic products. It is incumbent upon the electronic designer to continue to provide products and services which enhance the overall efficiency of the commercial vehicle operator's fleet.

1977 (1)* the number of microprocessor controlled functions has increased to thirty (Figure 1). This trend over the past decade is expected to be experienced by the truck industry during the balance of this decade. The need for electronics to withstand more harsh environments and to demonstrate positive cost effectiveness will result in a somewhat slower truck introduction than that experienced with passenger cars.

that control truck road speed, engine speed and PTO speed have been introduced and are in production. In one example (Fig. 2), a solenoid valve controls fuel pressure to the injectors for accurate speed control. A vehicle speed sensor and an engine speed sensor transmit speed data to the electronic control unit (Fig. 3) (3). This unit controls, with extreme accuracy, functions such as: cruise control, variable engine speed governing, torque limiting, and road speed governing.



WEIGHT CONTROL - European countries
on the Commission legislation process

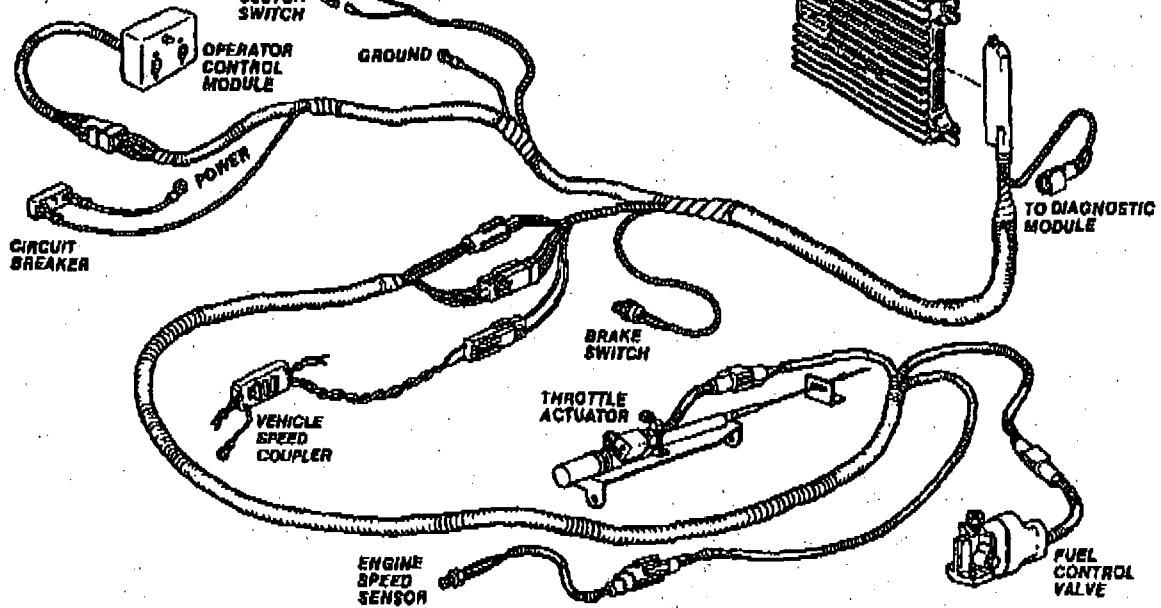


Fig. 2 - Electronic cruise and speed control components (TRW ETBCTM System)(3)

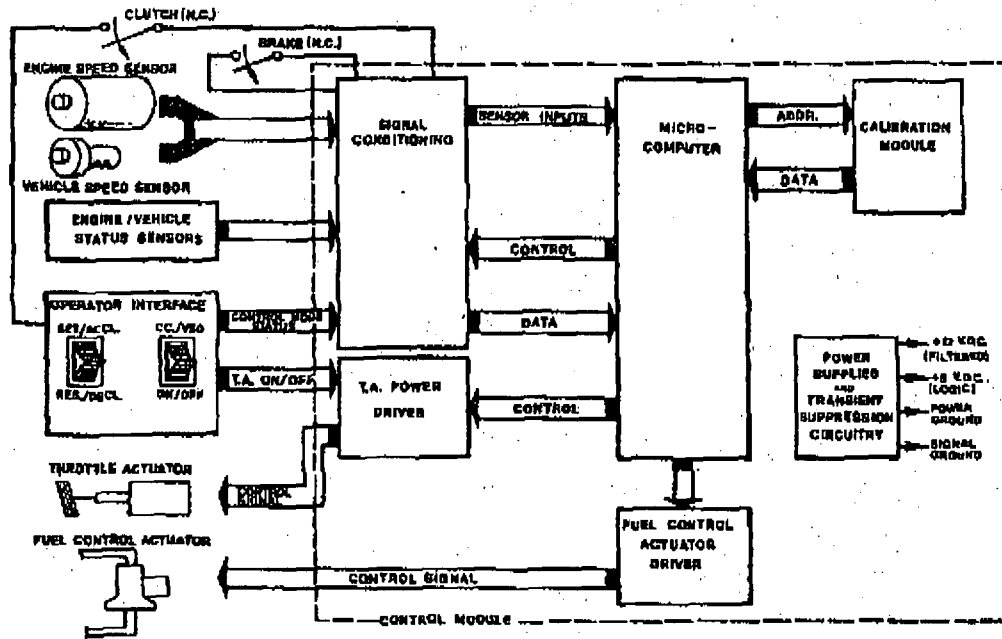
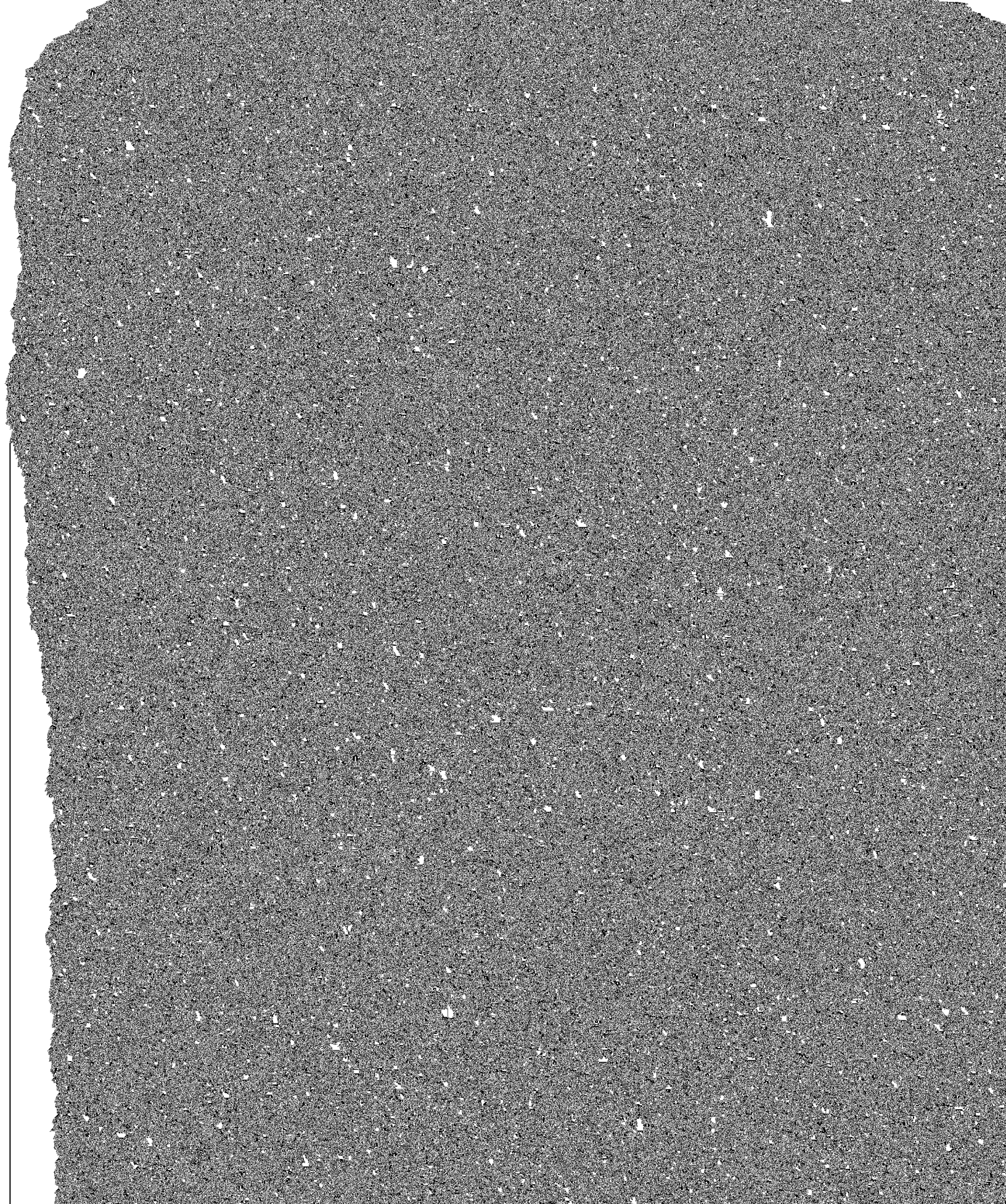


Fig. 3 - Electronic Control Module and System Schematic



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