

Eaton's new vehicle steering system uses a proprietary electronic controller and integrated steering column torque sensor to provide hydraulic assist only when demanded by the driver in response to road conditions. The Eaton system operates only when necessary, saving gas and improving the driver's feel for the road.

In Europe, we continue researching a system of sensors and microprocessor controls for the family washing machine that can determine the requirements of a wash load and then control system components to provide just the right amount of water, heat and cycling required for cleaning.

Communicating with Products Electronics are dramatically improving communication capabilities, beginning with more user-friendly operator interfaces. These include highly sophisticated man-machine and operator touchscreen panels and supporting software; a host of automotive convenience switches controlling functions ranging from window lifts and door locks to sunroofs,

trunk releases and interior lights; new electronic controls for gas and electric ranges; better shift levers for automated transmissions; and a new mini-trip computer and compass for Chrysler that gives vehicle occupants a wide range of useful navigational data.

Eaton is a leader in vehicle multiplexing, and in 1995 began delivering multiplexed components to Chrysler that permit electronic controls attached to vehicle components to communicate with one another via a single twisted pair of wires. This system reduces weight and lowers costs by eliminating the spaghetti-like wiring harness in vehicle doors and dashboards required to run individual wires to each switch. This technology is also being applied in Eaton's truck, hydraulics, aerospace, industrial and appliance controls businesses.

Cutler-Hammer is also developing a new platform of logic control in the industrial automation market. Device level networking and personal computer-based controls are rapidly replacing proprietary

AUTOMATING THE WORLD'S BEST TRUCK TRANSMISSIONS

Electronics are bringing a host of new capabilities to the world-class Eaton Fuller transmissions. The Top 2 (center) is a Super 10 transmission with only the top two gears automated. It is ideal for long-haul, on-highway trucks which spend the majority of their time in ninth and tenth gears. The AutoSelect transmission (top) is a 10-speed, semi-automated model being marketed in North America that requires the clutch only for stops and starts. It is designed for shift-intensive driving in local and regional pickup and delivery. A similar model, the AutoShift, was originally launched for motor coaches and is now being readied for on-highway truck applications. The SAMT (lower right) is a semi-automated model with a 16-speed gearbox. It is being marketed in Europe for high-density driving. Drivers use the clutch only to stop and start; a microprocessor selects ideal shift points and shifts instantaneously, reducing the driver's workload. The CEEMAT (lower left), a 9-speed with a torque converter, has been fully automated with microprocessor controls, making it the right choice for trucks used for concrete delivery, refuse hauling, and construction deliveries.