

Future Cargo Vehicle FCV



Davis Technologies and ARVIN MERITOR teamed to provide the truly unique independent suspension system for Multi-Drive's Future Cargo Vehicle FCV. DTI replaced the standard Coil over Shock units which have a combined weight of approximately 127kg each corner with DTI ride struts weighing just 67kg per unit which drastically reduced corner weight and unsprung weight. These lighter ride struts and have a unique Dual Rate spring force that provides the same greatly improved mobility and roll stability for the vehicle (laden or unladen). This system has two modes of operation; In Auto mode, the performance of the vehicle was further enhanced by the addition of dynamic ride height control for uniform ride height regardless of load. The DTI system takes this leveling function a step further with the option of supplemental low bandwidth active control for the vehicle. In situations where more roll control is needed, the ride struts can become low bandwidth active actuators with the assistance of the computerized pressure control system and control software, further increasing ride and performance characteristics parity between the fully laden and unladen vehicle. In Manual Mode, using the suspension control pendant, the driver can raise, lower, tilt or kneel the vehicle for routine cargo loading/unloading and service operations like tire changing. In manual mode the vehicle can be operated in either unladen or laden condition to simplify transport loading, raise vehicle to enhance mine protection, or tilted to increase side slope capability.

Davis Technologies International, Inc.