With the press of a button from inside the cab, Spicer® CTIS maximizes vehicle mobility by adjusting tire pressure to provide the optimum footprint on any terrain. Whether in the field or at a construction site, Spicer CTIS promotes confidence on soft, sandy soil and other unpaved surfaces.
Spicer® CTIS Offers Enhanced Mobility for Government Defense and Vocational Vehicles

Flexibility was a key factor in designing the Spicer® Central Tire Inflation System (CTIS). Its various setting options enable users to adjust tire pressure based on vehicle load, terrain type, and application. CTIS adjusts tire pressure to the optimum level whether driving at highway speeds on paved surfaces, unpaved surfaces, or off-road. It is also possible to free a stuck vehicle or take on grades and other extreme conditions that previously required assistance, as CTIS allows vehicles to function with extremely low tire pressures. Convenient push-button operation allows for optimum pressure selection, and integrated diagnostics alert drivers of potential tire problems and system status – making CTIS a valuable component for any application.

**Features**
- Convenient push-button operation
- Automatic over-speed protection
- Automated tire maintenance feature checks and maintains pressure at selectable time intervals
- Multi-channel pressure control available by axle groups
- Electro-pneumatic controls
- System provides integration and control of engine, transmission, ABS, and axle differential locks via an SAE J1939 (CAN) data link
- Field programmable
- Integrated diagnostics
- No external air lines. All rotating seals are internally mounted for reliable operation
- Automatic run flat, limp home vehicle operation in the presence of major tire leaks
- OEM installed and warranted

**Benefits**
- Allows accurate selection of tire pressure for terrain and load condition
- Maintains appropriate pressure at speed and maintains tire life
- No operator intervention required
- Maximizes performance by application
- Automated driver enhancement for easy operation
- Complete vehicle application flexibility
- Alerts driver of potential tire problems and system status
- Enhances reliability and eliminates possibility of damage due to external hoses
- Avoids disabling vehicle when most major tire leaks are encountered
- Reliable performance and service support

**Improved Mobility**
- Increases traction on unimproved roads, severe grades, sand, and mud.
- Allows higher vehicle speeds over a greater variety of terrains.
- Allows continuous vehicle operation in the presence of minor tire leaks.

**Enhanced Efficiency**
- Allows users to match tire pressures to vehicle loads and speeds, resulting in reduced vehicle operating costs.
- Extends tread life and improves fuel economy.
- Reduces instances of costly tire punctures and tread chunk-out.
- Benefits highway authorities, as road damage is significantly reduced, resulting in lower maintenance and construction costs.

**Reliable Performance**
- Eliminates tire leak down – seals and control hoses are isolated from tires and not pressurized during normal operation or when parked.
- Truck brake air supply is protected by an air priority system.
- Provides a better ride, lower step height, and reduced driveline maintenance.

**Differentiating Features**
- Provides for the electronic control of inflation and deflation of tire pressure from the cab, while the vehicle is in motion.
- Dana system includes patented designs and algorithms.
- Dana offers the industry’s only mechatronics design.
- Dana has extensive experience, a broad portfolio, and is the CTIS global market leader.

New Mechatronic Control Unit (MCU) Option

Dana offers the Mechatronic Control Unit (MCU) as an option to meet the requirements of lower flow applications. The integrated system has a smaller footprint with reduced weight and less wiring complexity that allows for individual wheel control when needed. The MCU design integrates electronic, computer, and mechanical engineering into one package to bring about weight reduction and improved reliability.

Enhancing Government Defense Vehicles

Reliability and performance are the most critical features in military applications. CTIS has been shown to significantly enhance the performance of all-wheel drive, maximizing mobility and delivering benefits, such as:

- Complete mobility optimization
- Limp home feature avoids disabling vehicle on the battlefield or other severe applications when most major tire leaks are encountered
- Wheel valves are sealed from environmental contamination
- Remote wheel-end venting for most demanding applications

Enhancing Vocational Vehicles

CTIS outperforms all-wheel drive (AWD) in soft soil applications. The performance enhancements are so great that Spicer CTIS can be used as an alternative to all-wheel drive for the majority of vocational truck applications. When used as an alternative to all-wheel drive, CTIS delivers reduced life-cycle costs, as well as:

- Increased payload by eliminating 450 kg of weight
- Reduced vehicle height by 30 to 35 cm and improved stability
- Reduced overall vehicle cost, complexity, and required maintenance
- Available from all truck manufacturers for a wide range of heavy truck models and configurations
- Works with steer, drive, and trailer axles