

## NoSPIN® Differential



### Availability

- Currently designed for most axle suppliers in the industry
- Can be designed to accommodate your new applications

### Benefits

- Provides a fully locked rear axle that automatically unlocks when wheel speeds are mismatched
- Maximum traction relative to other rear wheel drive vehicles
- Maintenance free - requires no special lubrication or friction modifiers
- Uses original differential case, with easy installation
- Extremely strong and durable unit
- 100% automatic locking action - even with one wheel off the ground
- No individual wheel spin-out
- Legendary durability and proven performance in a wide variety of applications

### Principle of Operation

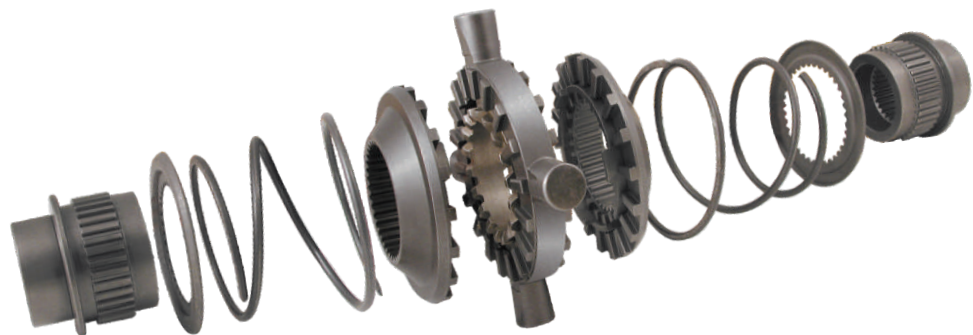
- Speed sensitive automatic locking differential - powers both drive wheels, yet automatically permits wheel speed differentiation as needed

### Technical Specifications

- Rear applications - unit is used in some very specific front and transfer case applications
- Compatible with four channel anti-lock brake systems

### Applications

- Construction
- Military
- Agriculture
- Forestry
- Mining
- Emergency
- Utilities



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## NoSPIN® Differential

Eaton's NoSPIN is a fully automatic, positive locking, traction differential. It is known around the world for its premium performance and smooth, dependable operation. This differential is the culmination of over 50 years of engineering for both original equipment and replacement applications. NoSPIN is a proven performer for light, medium and heavy duty trucks, off-highway, agricultural, forestry, military and specialty equipment vehicles.

NoSPIN maximizes traction by delivering 100% of the torque and power to both drive wheels. It is

engineered to keep both wheels in a constant drive mode, yet has the ability to automatically "unlock" to permit necessary wheel speed differentiation. The NoSPIN is "trouble free" and doesn't require special lubricants or service adjustments.

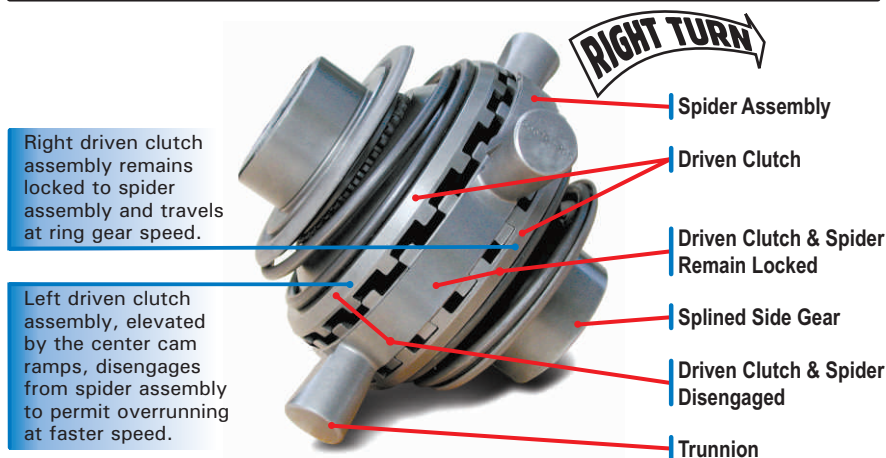
Conventional differentials allow vehicles to get stuck when they lose traction on one side.

NoSPIN continues to drive your vehicle even if one of the wheels is suspended in the air.

Eliminate your traction problems with NoSPIN!

### Traction You Trust!

#### Position of NoSPIN differential driven clutch assembly when making a right turn.



The Eaton NoSPIN is a speed sensitive automatic locking differential. It powers both drive wheels, yet automatically permits differential action to compensate for wheel speed differences that occur when making a turn or driving over obstacles.

The NoSPIN assembly has left and right clutches with locking teeth that engage with similar teeth on the spider. The assembly is installed in the differential support case by means of four trunnions. Both clutches engage with special side gears, on slip-fitting splines. Cam ramps located inside the spider assembly allow either clutch to overrun the spider and, when wheel speed differences are required, momentarily disengage itself from the driveline. A return

spring re-engages the clutch with the spider when the vehicle returns to straight driving.

When the vehicle is driven straight forward or reverse, the drive members remain locked to the spider. The drive axle operates as if the axle shafts are locked together. Both wheels turn at the same speed, even if one wheel lifts off the ground.

When the vehicle makes a turn or when a wheel passes over an obstruction, that wheel automatically rotates faster than the other for wheel speed differentiation. The faster turning wheel overruns, momentarily, until both wheel speeds are synchronized. When wheel speeds match, the NoSPIN automatically re-engages to fully locked operation.



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