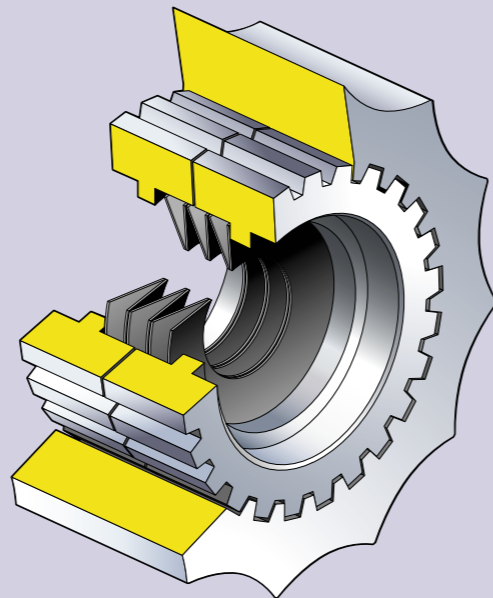


## More traction, more speed

- Unique Quaife patented design prevents complete loss of drive which can occur with conventional differentials when one wheel slips
- Used by Ford, General Motors and Daimler-Chrysler as original equipment
- Used in all forms of Motorsport, such as Formula 1, rallying, truck, drag and drift racing
- Improved traction leads to better acceleration
- Consistent traction out of corners means better exit speeds and shorter lap times
- Inherently safe, never locks solid
- Controlled power transmitted to all driven wheels, maximises traction and minimises wheelspin
- Fully automatic operation
- Eliminates unwanted torque-steer, under-steer and snatching characteristics of other types of LSD
- Gear operated, no friction plates to wear or break
- Benefits all year round regardless of traction conditions
- Direct replacement for standard unit
- Minimal maintenance requirements
- Retains normal axle lubrication systems
- Available for hundreds of different vehicles with new applications being added continuously
- Ideal where off-road capability is advantageous such as Police, Rescue and Public Utility vehicles
- CAD designed, CNC machined, and inspected to ISO9001-certified standards
- Manufactured from quality-certified Corus steel billets
- Over 100,000 sold and still in circulation worldwide
- Beware of cheap imitations!
- If you cannot see your vehicle listed, please contact our sales department



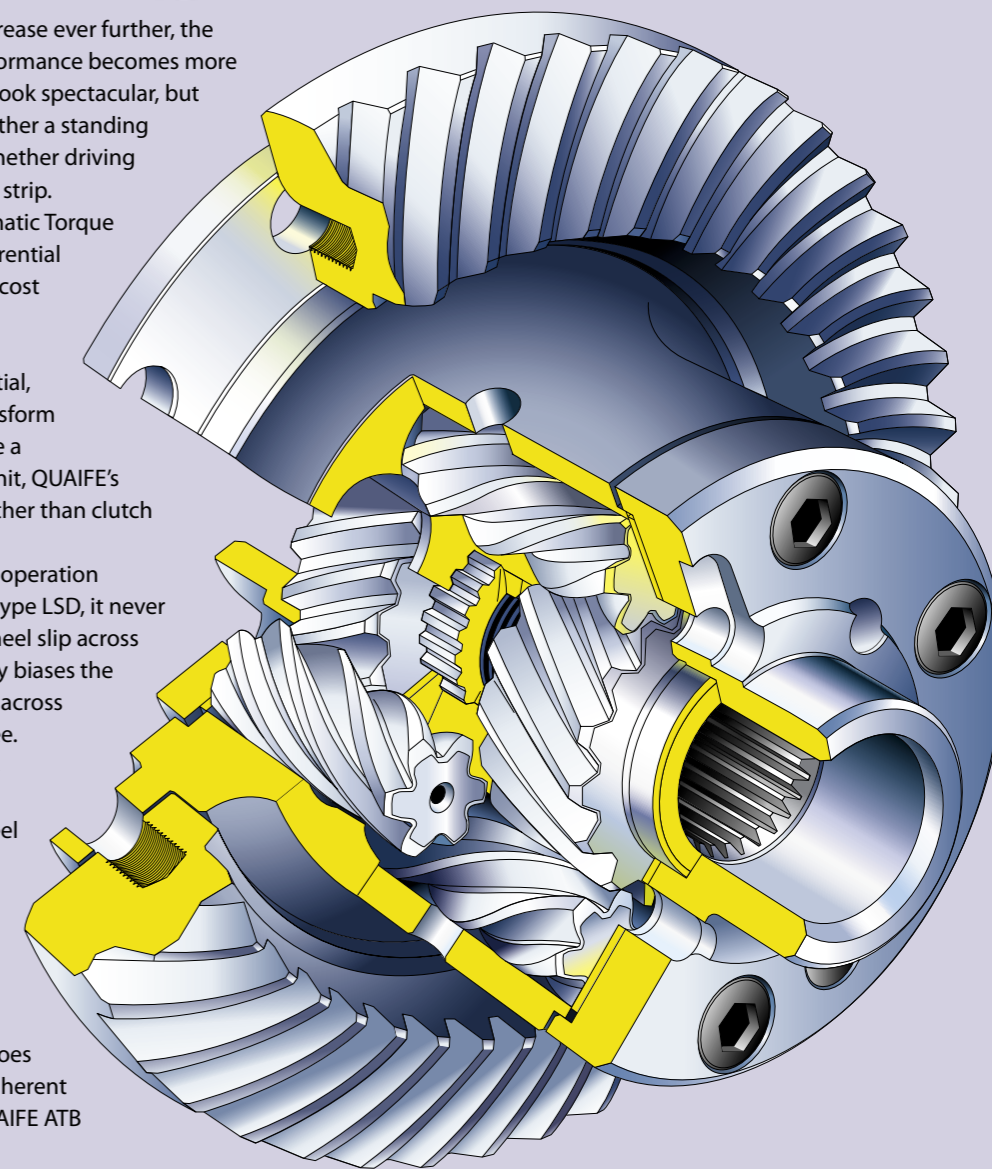
As engine power outputs increase ever further, the ability to use this extra performance becomes more important. Wheelspin may look spectacular, but such loss of traction from either a standing start or exiting a bend wastes time, whether driving on the road, circuit, rally stage or drag strip. Fortunately, QUAIFE's patented Automatic Torque Biasing (ATB) Helical Limited Slip Differential (LSD) is an effective, well-proven, low-cost solution.

As a direct replacement for the standard, factory-fitted 'open' differential, QUAIFE's ATB helical LSD unit can transform the performance of any vehicle. Unlike a conventional plate-type limited slip unit, QUAIFE's ATB Helical LSD unit relies on gears rather than clutch plates for its operation.

That means it is much smoother in operation because, unlike a conventional plate-type LSD, it never locks harshly with a set pre-load of wheel slip across the driven axle. Rather, it automatically biases the torque away from the spinning wheel across the axle, to a constantly varying degree.

Sets of floating helical gear pinions mesh to provide the normal-speed differential action. In the event of wheel slip, torque bias is generated by the axial and radial thrusts of the pinions in their pockets. The resultant friction forces enable the differential to transmit a greater proportion of the torque to the appropriate wheel. The effect is progressive and at no stage does the differential lock solid, hence the inherent safety and user-friendliness of the QUAIFE ATB Helical LSD unit.

To the driver, especially of a front-wheel drive car, the results are significant performance improvements; superior, controllable traction without the harsh steering wheel snatch or



torque steer that have long been associated with performance differentials. These traction benefits can also be utilised in rear-wheel drive vehicles, while QUAIFE ATB Helical LSD units offer significant traction advantages when fitted in the front of four-wheel drive cars.

Reliability is total, making the QUAIFE ATB Helical LSD unit a true "fit and forget" solution. The ATB units are designed using the latest CAD techniques and CNC machined to ultra-tight tolerances from high quality Corus steel billets. The completed units are then subjected to rigorous in-house inspection with 3D coordinate measuring machines before being dispatched to the customer.

Such quality means that, unlike a conventional plate-type LSD, the QUAIFE ATB Helical LSD unit requires no special maintenance or rebuilds, is long-lasting, and retains the standard method of lubrication, making for an easy, pain-free upgrade.

Proven in rallying, racing and on the road, the QUAIFE ATB Helical LSD differential offers safe, reliable, winning performance – everything you would expect from a QUAIFE product.

