Viscous LSD

VISCODRIVE

GKN Driveline's reliable speed-sensing Viscous Coupling and Viscous LSD (Limited Slip Differential) are proven in front and rear axle/transaxle applications as well as in on-demand and full-time all-wheel-drive drivelines. Viscous coupling and Viscous LSD are cost effective and highly durable speed-sensing limited slip designs.

Benefits

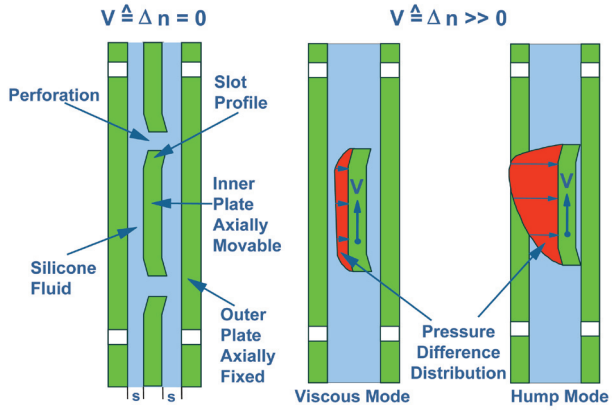
- Significant improvement to vehicle handling, stability and traction
- Dampens undesirable driveline torsional NVH
- Unsurpassed reliability
- Available in die cast aluminium construction for significant weight and cost reduction
- In production since 1984

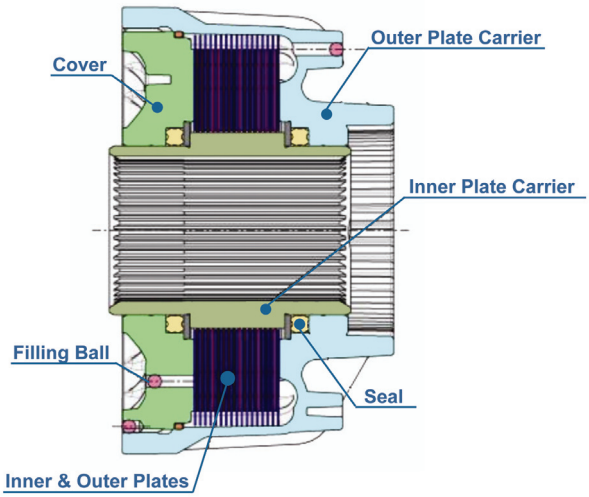
Operating Principle

- Alternating inner and outer plates are submerged in silicone fluid
- The relative speed difference between the plates produces a shear stress in the fluid filled gap
- The resulting shear stress transfers torque from one opposing plate to the other
- The speed difference dependent torque transfer redistributes driveline torque to the wheel or axle with the better traction
- Additional locking torque in excess of skid torque is available via the "Hump" mode
- The "Hump" mode is activated when the coupling achieves 100% filling due to fluid thermal expansion thereby amplifying a hydraulic throttling effect between the plates

Technical Features

- System is sealed for life requiring no maintenance
- Silicone fluid is optimised with specific additives for lifetime performance
- Viscous plates have specifically designed slots/holes and heat treatment
- The degressive locking characteristics (viscous mode) can be tuned by fluid viscosity, number and size of plates, and fluid filling percentage
- The "Hump" mode activation is tuned by the fluid filling percentage
- Steel coupling applications are laser welded





For further information please contact:

GKN Driveline
PO Box 4128, Redditch, Worcestershire, B98 0AW, United Kingdom
Tel: +44 (0)1527 533600, Fax: +44 (0)1527 533633
Email: info@gkndriveline.com, www.gkndriveline.com